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DIANE LYON '81

OPERATION AND DEVELOPMENT PLAN

Forest Service

Shasta-Trinity National Forests

Shasta and Clair Engle-Lewiston Units of the Whiskeytown-Shasta-Trinity National Recreation Area

S92 0083

OPERATION AND DEVELOPMENT PLAN

for the

SHASTA and CLAIR ENGLE-LEWISTON UNITS

of the

WHISKEYTOWN-SHASTA-TRINITY

NATIONAL RECREATION AREA

located within the

Shasta Lake and Weaverville Districts

of the

Shasta-Trinity National Forests

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- Need policy on timeshare
- Need clarification on floating campgrounds
- Need all inclusive definition of resort.

Table of Contents

		Page
I.	INTRODUCTION	
	A. General	1
	B. Goals of the Plan	3
	C. Format and Organization	4
	SHASTA UNIT	
II.	SUMMARY OF MANAGEMENT SITUATION AND ASSUMPTIONS	
	A. Natural Environmental Setting of the Planning Unit	5
	B. Natural Resource Characteristics of the National Forest Lands within the Unit	10
	C. Socio-Economic Environment	19
	D. Issues and Opportunities of Critical Concern	22
	E. Assumptions	24
III.	UNIT MANAGEMENT DIRECTION	25
IV.	IMPLEMENTATION PLAN	26
	CLAIR ENGLE - LEWISTON UNIT	
II.	SUMMARY OF MANAGEMENT SITUATION AND ASSUMPTIONS	
	A. Natural Environmental Setting of the Planning Unit	34
	B. Natural Resource Characteristics of the National Forest Lands within the Unit	38
	C. Socio-Economic Environment	48
	D. Issues and Opportunities of Critical Concern	51
	E. Assumptions	53
III.	MANAGEMENT DIRECTION	54
IV.	IMPLEMENTATION PLAN	56
V.	APPENDIX	
	A. Bibliography of Other Information Sources, Studies and Analysis	62
	B. Legislation and Regulation --- Federal and Local	67
	C. Land Capability Maps	
	D. Summary of Proposed Land Acquisition	86
	E. Summary of Anticipated Effects of Implementation of the Plan (From Final Environmental Statement)	90
	F. Master Plan -- Whiskeytown Unit as prepared by the National Park Service	92

I. INTRODUCTION

A. General

This plan has been prepared by the Forest Service, US Department of Agriculture, for the operation and development of the Shasta and Clair Engle-Lewiston Units of the Whiskeytown-Shasta-Trinity National Recreation Area. This plan is the next step below the Forest and Resource Management Plan in the hierarchy of National Forest land use planning process. The Forest Plan provides goals, objectives, guidelines, standards and prescriptions to guide management. The NRA Operation and Development Plan provides more detailed direction on implementation of the Forest Plan.

These two units of the National Recreation Area, located in Shasta and Trinity Counties in California, are a part of the Shasta-Trinity National Forests. A third unit of this National Recreation Area -- Whiskeytown -- is located outside the National Forest and is administered by the National Park Service. The proposed action fulfills the basic purpose of PL 89-336 which established the NRA "to provide, in a manner coordinated with the other purposes of the Central Valley Project, for the public outdoor recreation use and enjoyment of the Whiskeytown, Shasta, Clair Engle, and Lewiston Reservoirs and surrounding lands by present and future generations... and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters...." The Final Environmental Statement covering this major federal action was filed with the Council on Environmental Quality on April 22, 1976.

As the several main structures of the Central Valley Project such as Shasta Dam and Trinity Dam were constructed, the lakes thus formed evolved into areas of substantial recreational significance to this portion of Northern California. Upon completion of the Shasta Project in 1945, the National Park Service initially administered the recreation features. In 1948 this administrative responsibility was transferred by Congress to the Shasta National Forest, with provision for cooperative agreements between the National Forest and the Bureau of Reclamation.

The Trinity Division of the Central Valley Project, including the Clair Engle, Lewiston, and Whiskeytown Dams and Reservoirs, was authorized by Congress in 1955 and completed in 1962. Since much of the Clair Engle - Lewiston division was located on the Shasta-Trinity National Forests, the Forest Service was an active participant in the planning of that project, especially concerning its potential recreation use. In 1956, Congress added the Lewiston Reservoir area to the National Forest and transferred administrative responsibility to the Forest Service.

Upon completion of Whiskeytown Reservoir, the National Park Service assumed interim administration of that unit, also under a memorandum of agreement with the Bureau of Reclamation. Legislation was then introduced in Congress to authorize the establishment of a

Whiskeytown National Recreation Area. In early 1962, the Secretary of Interior proposed deferment of action on the Whiskeytown bill and other similar legislation, pending a study to be made by the Department of Agriculture and Interior, of the entire complex of reservoirs.

The study was undertaken by a task force composed of representatives of the several Federal departments, the State of California, and the respective counties, under the leadership of the Bureau of Outdoor Recreation. The report, completed in 1963, recommended the establishment of a National Recreation Area composed of three units -- Shasta, Clair Engle - Lewiston, and Whiskeytown -- as the most logical way to obtain the desired objective of maximum sustained recreation benefits. Although the task force itself did not make recommendations as to administration of the three units, an agreement between the Secretaries of Agriculture and Interior suggesting the present arrangement was made a part of the report. Legislation was subsequently introduced to the Congress and on November 8, 1965, the President signed the Act -- Public Law 89-336 -- "to establish the Whiskeytown-Shasta-Trinity National Recreation Area in the State of California, and for other purposes." The Shasta and Clair Engle - Lewiston Units of the NRA continue to be administered by the Forest Service; and the Whiskeytown Unit continues to be administered by the National Park Service.

The legislation required that the respective counties enact zoning ordinances relating to the private land within the NRA, which would prescribe the uses which could be made of the private land to further the purposes of the Act. Such zoning ordinances would be required to meet zoning standards set forth in regulations issued pursuant to the Act, and to be approved by the respective Secretary. These zoning regulations were issued by the Secretary of Agriculture and published in the Federal Register on September 16, 1967. Zoning ordinances in both Shasta and Trinity Counties were enacted in accordance with the regulations and were approved by the Secretary of Agriculture.

The elements of the legislation which provided for retention of much of the private land in that status also provided for and prescribed the conditions under which development of private land could occur. Extensive development has not occurred in the Clair Engle unit, however, private land development within the Shasta unit is increasing at a moderate rate, and is expected to continue. Most of the development has been done in accordance with the respective County zoning ordinances. The legislative controls have worked well in furthering the objectives of the National Recreation Area. There are provisions for the issuance of Certificates to private land owners who develop their private land for public purposes. The purpose of the certificate is to assure the private land owner that as long as the land is used for that purpose the Secretary's authority to acquire the property is suspended. Only four such Certificates have been issued.

Revisions of existing plans must guide the development and use of this National Recreation Area in the immediate future. The planning has been done within the framework of a thirty year plan period, and all projections of use, cost and benefit calculations, and resource needs have been analyzed on that basis. The environmental statement reviewed the proposed plan for the Shasta and Clair Engle - Lewiston Units, and measured the environmental effects which will arise from implementation of the plan.

Since the implementation of the legislation, and particularly during the period that this planning process has occurred, there has been ample opportunity to assess the effectiveness of the legislation to meet the goals and objectives for which the legislation was enacted. The legislation has been and continues to be adequate for the task.

B. GOALS OF THIS PLAN

1. NATIONAL RECREATION AREA GOALS (based upon PL 89-336)

To conserve scenic, scientific, historic, and other values which will contribute to long term public use and enjoyment; and provide interpretation of the historical and archaeological sites and the significant natural features to enhance the recreational experience of the user.

To provide, at a sustained high level, the optimum high-grade balanced recreational uses appropriate to the Area's lands, waters, forests, and wildlife, through an integrated combination of public and private facilities and programs including:

(1) Consideration of and provision for off-road vehicle use in areas where soils, watershed and vegetation damage will not occur.

(2) Provision for dispersed recreation within the ecological carrying capacity of the land.

(3) Provision for a variety of recreational opportunities for people of all economic levels consistent with maintaining a quality experience.

(4) Provisions for protection of the health and safety of the using public.

To provide for planned use of other resources which will be compatible with and promote the preceding primary objectives. The utilization of such other National Forest resources will be carried out under National Forest management criteria to the full extent consistent with the Area's recreation, aesthetic, and environmental values.

To determine the extent of need for development of public facilities such as boat launching ramps, campgrounds, roads, view points, scenic drives, resorts, marinas, or other

improvements to permit full use and enjoyment of the natural resources without degradation of environment.

To provide guidance, through participation of the respective County governments, for the development of private lands to best meet the overall objectives of the NRA.

2. FOREST SERVICE GOALS (excerpted from "Framework for the Future")

Promote and achieve a pattern of natural resource uses that will best meet the needs of people now and in the future.

Protect and improve the quality of air, water, soil, and natural beauty.

Generate forestry opportunities to accelerate rural community growth.

Encourage the growth and development of forestry-based enterprises that readily respond to consumers' changing needs.

Seek optimum forest landownership patterns.

3. NATIONAL GOALS FOR LAND USE PLANNING

To enhance national economic development by increasing the value of the Nation's output of goods and services and improving national economic efficiency.

To enhance the quality of the environment by the management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems.

C. FORMAT AND ORGANIZATION OF THE MATERIAL IN THIS DOCUMENT

Although these two units of the National Recreation Area are basically two distinctly separated land areas to which could be applied the term of a "Unit" in the planning process, the legislation dictates a unified management. For simplification the two separate unit plans have been mechanically combined into a single document. At this point the Shasta and Clair Engle - Lewiston units will be separated into what could be construed as two unit plans.

In addition, for convenience, the essential parts of the final Master Plan for the Whiskeytown Unit of this National Recreation Area has been placed into the appendix.

A. NATURAL ENVIRONMENTAL SETTING OF THE PLANNING UNIT

1. LOCATION AND GEOGRAPHICAL SETTING

The Shasta Unit lies in the north central portion of Northern California, at the juncture between the foothills of the Sacramento Valley on the south, and the southern end of the Cascade Range on the north. To the east lies the extreme southern end of the Cascade Range which almost imperceptibly blends into the northern end of the Sierra Nevada Range; and to the west is the Coast Range.

This area is bisected by Interstate 5 which provides easy and rapid access, in 4 hours or less, for the 5 million residents of Southern Oregon and Northern California, including the major urban population of Sacramento and the San Francisco Bay area. An additional 15 million people live within a one-day's drive, mostly in the Los Angeles basin. The City of Redding and its associated communities, with a population of about 95,000 lie 10-20 miles directly south of the Unit boundary.

2. BOUNDARY AND PHYSICAL DESCRIPTION

The boundaries of this unit were delineated by the legislation which established the NRA. The Unit consists essentially of the Unit-dominating Shasta Lake and its surrounding tributary lands. The total area of the Unit is 134,500 acres which includes the 29,500 acres of lake surface at the full elevation (1067').

The land acreage included within the boundaries encompasses sufficient land to provide the needed on-site developments to fulfill the basic purposes of National Recreation Area. In addition ample acreage of the terrain surrounding the Lake was included to enable the administering agency to protect scenic and other desirable attributes of the total unit environment.

The boundaries as originally established have proved to be correctly located to accomplish the purposes and objectives of the legislation. No changes are recommended.

3. CLIMATE

The long, hot, dry summer so characteristic of the area is one of the strongest factors which attracts the vast number of recreationists during that season. Daytime high temperatures very commonly exceed 100°F throughout a 100 day period and rarely are less than 90°F. Nights are nominally cool and in the low 60°F range.

The climate during the remainder of the year also fosters considerable recreation use, other than water contact sports. The Unit is covered by snow for only short periods each winter, with a

total annual snowfall generally being less than 12 inches at the lower elevations. Sub-freezing temperatures occur in the winter, but seldom fall below 10°F. Between storms, which normally occur from October through April, there can be relatively long periods of sunny and cool weather, which makes the Unit most appealing for winter recreation. Much of the fishing, and some powerboating and houseboating, occurs during these periods.

Total precipitation in the Unit, mostly in the form of rain, varies from 50 inches along the southern edge to 70 inches in the upper Sacramento and McCloud arms of the Lake. Approximately 85 percent of precipitation is distributed in the 6-month period from November 1 to April 30.

Heavy rainfall is generated in the Shasta Lake area by the configuration of mountains on both sides of the north end of Sacramento Valley. This forms a funnel that results in concentrated precipitation near the upper end of the valley in periods of winter storms marked by strong south winds.

Winds are light, reaching 30 mph or higher only infrequently. However, winds of 50-80 mph can be expected during winter storms.

4. LANDSCAPES AND GEOLOGY

The landscapes along the southern central boundary of this unit vary from hilly to moderately steep topography, with elevations ranging from 1,000 to 1,500 feet. The majority of the remaining portion of the unit is moderately to extremely steep, with elevations up to Town Mountain's 4,300 feet. There are some flat to gently sloping areas with potential for campground development along the perimeter of the lake. Unfortunately, such areas are few, which considerably limits shoreline use and development.

The geology of the area is comprised almost entirely of the Klamath Geologic Province geologic formations. The heterogeneity and complexity of the geology is as complex as may be found anywhere. The bedrock of the unit is mostly intermingled ancient metamorphosed volcanic and metamorphosed marine sedimentary formations, varying in age from the Triassic period (181 million years old) to the Devonian period (400 million years old). Limestone bedrock occurs from place to place; although they make up only a limited extent of the total unit, these limestone rock areas provide some outstanding rugged rock outcroppings as well as limestone caves, which hold substantial archaeological and tourist interest.

Small areas of intrusive granitic rocks occur at the south central boundary of the unit and along the terrain adjacent to the McCloud River arm. Some local, recent volcanic basalt-flow bedrock exists along the eastern edge of the unit adjacent to the Pit River arm, and also in the vicinity of Lakehead along the Sacramento River arm. The unit as a whole has an abundance of rock outcroppings along ridge sections, and on excessively steep mountainside slopes which are prevalent throughout the unit.

5. SOILS AND VEGETATION

The soils derived from both the metavolcanic rocks and the metasedimentary rocks vary considerably in characteristics, depending upon local slope, aspects, vegetation, and climatic conditions. As a whole, the soils found at the lower elevations of the unit, derived from both the metavolcanic and metasedimentary rocks on moderately steep to steep terrain, are shallow and characteristically gravelly loam, to gravelly clay loams which support the dominant shrub and scrub oak vegetation. In these areas, low-site mixed conifers are found associated with the shrub types on the cooler northerly aspects.

On the more gentle slopes at lower elevations, the soils are normally deep, consisting of loam surface soils and clay loam subsoils which are dominantly reddish-brown in color. The vegetation associated with these soils are mainly shrubs, hardwoods, and mixed conifers. Yellow pine, Douglas-fir, and incense cedar are the dominant conifer species. On the steep, highly dissected landscapes of the higher elevations of the unit the soils are dominantly gravelly loams which vary in depth with slope. A mixed conifer forest of medium timber site is prevalent for most of the area. Some steep south and southwesterly surface exposures are characterized by very shallow soils and a dominance of shrub-type vegetation. Many of these slopes are also associated with rock outcroppings. North slopes usually have deeper soils.

The soils of the unit as a whole are inherently only moderately erodable. However, in some areas affected by man's activities through road construction and other land disturbances, soil erosion has been significant. Shoreline erosion in some areas affected by wave action has been substantial, especially during periods when the lake surface level is at its highest. Associated with the shoreline soil-sloughing failures is a shoreline soil turbidity problem. Many of the deep reddish-brown clay textured soils are found adjacent to the shoreline. Consequently, when shoreline soil-sloughing occurs, the fine-textured reddish clay material remains in suspension for long periods of time, which detracts from the aesthetic values of the lake. Intensive water recreational activity such as skiing, fast boating, or shoreline swimming will result in highly conspicuous turbidity along the shoreline, especially in narrow arms of the lake where water-use activity is concentrated.

Considerable soil erosion has occurred on the landscapes along the southwest section of the lake, just west and north of the dam. Many years prior to completion of the dam, copper-ore smelting plants existed at Kennett - once a small community along the Sacramento River. Smelter fumes containing substances toxic to plant life completely killed all existing vegetation of the adjacent mountainous terrain. The resulting continual erosion devastated the landscape. Through a restoration program, the area is now slowly healing over, but not without some residual problems.

As of the date of the environmental statement for the original plan no species of vegetation have officially been designated in this area as threatened or endangered under the Endangered Species Act of 1973. The following plants have been listed by the California Native Plant Society as rare and endangered and by the Forest Service as sensitive:

Eupatorium shastense, thoroughwort or Shasta eupatorium identified at Hirz Mountain and the North Gray Rocks east of the McCloud Arm.

Cypripedium californicum (California Lady Slipper, an orchid) and Crypripedium Facciculatum (Brownie Lady Slipper) are believed to be in the area, but have not yet been located.

Arnica Venosa, Veiny Arnica has been identified in locations throughout the NRA.

6. AIR

The Shasta Unit is the most northerly portion of the Sacramento Valley Air Basin, and lies outside the more heavily populated portions of the Valley.

Resident population of the 200 square miles of the Unit is estimated at 1,200 people. Air quality in the Unit can be described as generally excellent, with some degradation caused by pollutant drift from the southerly portion of the Basin into the Unit. The air pollutants of the Basin itself do not appear to be significant, however, when they are expressed as a percentage of total statewide emissions:

Organic Gases	8.2%
Oxides of Nitrogen	6.3%
Carbon Monoxide	8.3%
Sulfur Dioxide	2.3%
Particulate Matter	12.0%

No industrial activities are carried on in the Unit which might add significantly to air quality deterioration.

Interstate 5, which bisects the Unit, has an annual average daily traffic of 11,000 vehicles per day measured at Bridge Bay. The California Department of Transportation (Cal Trans) does not consider that this highway traffic creates an air quality problem because of the excellent continuous dispersion by circulation. Wind currents average 6-8 miles per hour from the south more than 75% of the time, and there is measurable air movement 95% of the time; this provides little opportunity for stagnation. The constancy of these air flows results not only from changes in weather conditions but also from a diurnal airflow from the south during daylight hours, and a switch to the night hours.

Within the Unit itself, motorboat use and campfires add to the pollution problem, but the normal mountain air movements (mentioned in connection with highway use) prevail to some degree over the balance of the Unit to disperse these pollution factors.

D. NATURAL RESOURCE CHARACTERISTICS OF THE NATIONAL FOREST LANDS WITHIN THE UNIT

1. RECREATION

The key recreation element of the Shasta Unit is the Lake itself with its 29,500 acres of water surface, its 365 miles of shoreline resulting from a physical configuration of four major arms with myriad coves and bays; and its generally uncrowded rural outdoor atmosphere. The combination of water and land surface provide opportunity to enjoy practically every form of outdoor recreation. However, some features - such as a hot climate, steep terrain, and deficiencies in forest cover - tend to favor water-oriented recreation as a main attraction, with land recreation as a secondary, albeit important, adjunct.

The Lake is admirably suited for all types of powerboating, including water skiing - a fact that the regional public has fully discovered. The hot, dry summers, and the relatively warm waters during a season of more than 100 days, provide the attraction which has resulted in an average use of 1,100 boats/per day during the summer season. Since both regional and national trends indicate a continued growth in this form of outdoor recreation, there is no question that current use on the Lake will continue to increase to the capacity of the Lake to sustain this use in a safe manner.

Since its beginning on the Lake less than 15 years ago, houseboating has grown in popularity until it challenges powerboating as the heaviest use of the Lake. About 330 houseboats per day are in use during the main season. The most important factor in this popularity is the miles of shoreline available, with the huge number of coves and bays which provide the essential element of seclusion needed to make the recreation particularly enjoyable. The houseboat has become a safe, convenient and modern way to enjoy the water surface for not only the few hours normally available to the powerboater but for the entire 24 hours of the day. These are indications that other users of the Lake are being constrained by this use. Nevertheless, houseboating will remain very popular for the foreseeable future.

Fishing remains a key form of recreation because of the Lake's long history of successful production, both as a warm and cold water fishery. Its popularity as a bass fishery is widely known; but equally well known is its success in providing trout fishing, especially for the famous Kamloops strain of rainbow trout. This is a sport that is enjoyed yearlong, with perhaps better success during the nine months of the year when other forms of recreation are minimal. But this must not minimize the importance of fishing during the three summer months, since that is the basic period when visitors are best able to participate in the activity.

Swimming is another popular part of the overall water-oriented experience. Most swimming occurs from boats in the deeper waters, as a part of houseboating and powerboating activities. Because of

the steep shoreline, the heavy drawdown during the recreation season, and the prevalence of a rocky and muddy shoreline, developed swimming sites are difficult to locate and expensive to construct and operate. However, the demand for developed swim sites, as expressed by the visitor is great.

There is only mild interest in the group of non-powerboating activities which include sailing, rafting, and canoeing. While these activities are increasing slightly, it is not felt that they will become a significant use of the lake, as the physical conditions of the reservoir do not encourage such use.

Recreation use of the land surface of this Unit serves to compliment the water-oriented recreation activities rather than being an end in itself.

Camping in developed sites is mostly used to provide the space which is essential to being able to enjoy the water surface during the daylight periods. This does not negate its importance as an activity but merely reflects the generally unacceptable conditions of hot temperatures and overall lack of the pleasant forest atmosphere usually found at higher elevations.

Much of the shoreline of the lake is unroaded because of steep, forbidding terrain. This has provided an opportunity for a unique camping experience - camping in small secluded undeveloped areas around the lake which are totally inaccessible except by boat. Because the suitable flat areas are small, with room for only a few parties, there has been good dispersion of the use with little site deterioration. There are drawbacks to this type of use; litter cleanup has been expensive, with little hope of keeping the job totally current. The potential from pollution caused by inadequate human waste disposal must be recognized.

Some hiking is done in the area but the lack of highly attractive terrain and the persistent hot temperatures do not create good conditions to invite the user.

Off-road vehicle use is confined to existing roads and trails and some of the area below the high water mark of the lake as the water recedes. Some off-road vehicle use does occur in a few locations - part of this use is an adjunct; the visitor brings along trail bikes to be enjoyed in addition to the water activities. There is also a limited amount of local use which has caused adverse impacts on soils and vegetation. Terrain is mostly too steep to make the activity very attractive, and in some areas there has been excessive soil damage and erosion resulting from what use does occur.

Hunting of bear, deer, and turkey and small game does occur but most of the seasons declared by the Fish and Game Department occur outside the main recreation season.

Use of the recreation resource in this unit of the NRA is quite closely associated with the Whiskeytown Unit located about 10 miles

to the southwest. Management is coordinated with the National Park Service as described in Section VII of this environmental statement.

2. WILDLIFE

This Unit, most of which remains undeveloped, supports numerous bird, animal, and reptile species. The discussion here is of necessity, restricted to a discussion of the more prevalent species and their habitat, against which the impact of any proposed plan of action may be measured. Several wildlife species, the southern bald eagle, (listed as endangered), osprey and Shasta salamander (both designated as sensitive by the Forest Service), are of special concern and their specific habitat requirements and protection needs have been recognized.

Although records relating to the status of the wildlife resource before dam construction are meager, the total acres inundated by the reservoir indicates that a severe readjustment in the wildlife population must have occurred, both in total numbers, as well as the range and distribution of the species.

Most of the Unit is still used today as winter ranges by the Columbian black tailed deer which migrate down from the surrounding higher elevations. Nearly all the land surface is below 3,000 feet elevation and below areas which are normally snow covered by any extended periods each winter.

Black bear are common throughout the unit during all seasons. With their diverse diet of grasses, berries, forbs, browse, insects, and carrion, they can easily survive on the rugged terrain and hibernate during the winter months when food is scarce.

Fifty-one Rocky Mountain Elk were imported in 1911 and released into the Squaw Creek drainage. Currently there is a herd estimated at about 500 animals. They range over the entire eastern portion of the NRA during all seasons, and extend into the higher elevations far to the north and east of the Unit during the summer months, with a few vagrants found in such distant spots as the Trinity Divide and the Medicine Lake country.

The southern bald eagle is present in the Unit with nine known territories which have been fully active and have fledged young annually. This represents a 3 fold increase over the past 5 years. In addition there are several territories which are listed as historic use sites.

This species has a very high fidelity to their established nests; a pair will return to the same nest area year after year if left undisturbed. The nests are generally found in the more remote parts of the lake in larger trees at a distance of 100 to 300 yards from the water's edge. For unknown reasons a single pair may construct as many as three nests within a given established territory. Nests of adjacent territories are found only at 3-5 mile intervals.

About 27 breeding pairs of ospreys occur in the Unit, and although less spectacular than the eagle, they are much more visible to the recreation visitor. The nests are generally closer to the lakeshore in the tops of broken-top dead trees, where the activities of incubating, feeding, and rearing of families are easily observed.

The Shasta salamander, listed as rare by the California Department of Fish and Game, is associated with the limestone caves and deeper ravines in and around the NRA. The degree of disturbance by human activity which the salamander can sustain is not yet known, and this must be evaluated before extensive habitat manipulation by man can be allowed to occur.

Other populations of birds include the turkey, California valley quail and mountain quail. Rabbits, gray squirrels, mountain lions, coyotes, and bobcats are found in significant numbers in the unit.

Trilobopsis roper, a rare mollusk, has been reported* in the generalized area of Stein Creek along the Pit Arm, but no additional information is available.

3. FISHERIES

The Shasta Lake fishery is a valuable resource not only in respect to the total amount of visitor days spent in this form of recreation, but also from the standpoint of actual number of fish caught annually. Also significant is that fishing is available on a yearlong basis with the relatively mild winter climate at this location. The lake is well known and considered as a good fishery for nine species of game fish - rainbow trout, (including the famous Kamloops), brown trout, small and largemouth bass, crappie, bluegill, channel cat, white cat, silver salmon and green sunfish. Other species contributing to catch in smaller numbers are Kokanee, brown bullhead, and a remnant sturgeon population.

One factor contributing to the overall productivity of the reservoir is the threadfin shad which were introduced in 1960 as a forage species for the game fish. By 1962, the population was well established and has remained a successful reproducer. All of the game fish in the lake (bass, crappie, silver salmon, catfish, and trout) are heavily dependent upon the shad for food - the exceptions are bluegill (insect diet) and the Kokanee (plankton feeders).

The major fishery is trout, both rainbow and brown, which is supported primarily by planted fish. It is not just a put-and-take program, however, for some grow rapidly to "trophy trout" size as a result of feeding on the abundant threadfin shad. Although only a comparatively small number of silver salmon are planted each year, their growth rate is comparable to the rainbow and the harvest shows a good percentage return. Kokanee have contributed less to the catch in years past, and are now seldom specifically sought by Shasta Lake Anglers.

*See Bibliography for specific reference.

The catch of warm water fish in Shasta Lake is nearly equal to that of trout. Small mouth bass constitute most of this catch with largemouth bass representing only about 2% of the catch.

Crappie and bluegill are present in large numbers and no catch limit is specified for either species. Channel and white catfish are locally abundant. These excellent food fishes are sought to a moderate degree by fishermen, (crappie and catfish most important species in the night fishing). Although a few long-lived white sturgeon are still present in the lake, they are not presently caught in sufficient numbers to be considered in fisheries management planning for the lake.

In general, the most productive trout fisheries are in the main body of the lake and in the Sacramento and McCloud River arms. Bass and other warm water species dominate the catch in the Pit and the Squaw Creek arms, where Fish and Game records indicate a very high harvest rate on smallmouth.

Several problems exist and are of significant importance in the management of the Shasta Lake fishery resource:

1. Hatchery-reared rainbow trout are especially vulnerable to the protozoan tissue parasite in the Pit River arm of the lake. For this reason, only brown trout, the Pit River strain of rainbow, and silver salmon are released in the Pit arm.

2. Each spring Little Squaw Creek on the Dry Creek arm near the dam releases copper and zinc toxicants into the lake, which originate from abandoned mines and mine tailings in the drainage. Trout are attracted to the mouth of the stream when flows are high, resulting in considerable losses of planted trout. Because of the size of the problem the only biological prevention or mitigation measures undertaken have been to release hatchery fish well up the arms of the lake, resulting in a longer migration to the toxic area or at least delaying the fish until spring stream flows drop and the fish are less attracted to the area. Some work is underway to reduce the amount of the toxins entering the lake.

3. Two types of turbidity occur on Shasta Lake. The first is the result of winter flood flows from tributary streams and rivers. When these are heavy such as those of January 1970 and December 1973, the reservoir remains turbid through the following summer, resulting in a measurable delay in trout growth and a lower percentage harvest of planted fish.

The second type of turbidity is produced by wave action against the barren erodible shoreline, both from natural wind action as well as boating and water skiing activity. The greatest effect here can be on largemouth bass spawning areas, which are particularly susceptible to suffocation of eggs in the nests as a result of silt settling in turbid areas. The turbid water is also believed to affect the ability of the male bass to defend the nest from predators during the spawning period which usually ends by mid-June.

4. WATER

Shasta Dam and its impounded lake constitute the "Keystone of the Central Valley Project". At Shasta's inception, tremendous benefits were calculated to spring from this multi-purpose project.

The 6.2 million acre-feet of water which flows annually (mostly in winter and spring) into Shasta Lake from the Sacramento, McCloud, and Pit river drainages is well controlled and beneficially distributed by the 4.5 million acre-foot impoundment.

The recreational appeal of this body of water has been enhanced by several obvious factors. Many of the problems encountered in construction of older reservoirs were avoided through federal acquisition of shoreline areas. This allowed more orderly development and use controls to encourage both public and private recreational facilities development. The high quality of receiving water has been achieved by a favorable inflow-outflow relationship of 1.4 to 1 (the total annual inflow is half again as large as the storage capacity of the reservoir). These conditions have been vital to the lake's recreation industry. Recreation management here aims at a high-quality experience for water contact sports, boating, and fishing. However, with shoreline development and water-based recreation constantly increasing, some degradation of water has inevitably occurred. Houseboat and other boater wastes, sewage disposal in areas of human concentration at the many resorts, summer home tracts, subdivisions, and campgrounds, accompanied by upstream municipal effluent, are together generating some basis for concern. But the anticipation that the water is becoming too poor for body contact or to drink (following light treatment for bacteria) is largely unfounded. Nevertheless, this fear exists and will probably persist. The dilution of localized contaminants by billions of gallons of water and direct exposure to nature's own purification system -- the sun -- substantially preclude any threats to public health. Possibly the only critical areas are those coves with poor water exchange, where pollutants are unable to dilute satisfactorily.

The most important water quality problems which Shasta Lake faces are turbidity, debris, and chemicals. The first, turbidity - fine soil particles suspended in water - drastically affects water values and use. Shoreline or bank erosion by wave action from wind and boats, winter-flood flows, and both natural and human upstream activities, all contribute to turbidity. The deep red soils around the lake are continuously subjected to shoreline erosion. Undercutting of the original land surface is accelerated during full reservoir storage in late spring. Water for industrial and domestic purposes requires costly filtration, fish life and productivity suffers, and recreational use and aesthetics are unfavorably affected.

Woody debris arising largely from natural sources and logging activity, has plagued public safety and usage of the lake's surface. The annual cost of sweeping activiites to remove the floating

material, damaged hulls, broken propellers and bodily injury are just a few indicators of this problem.

Finally, the vulnerability of the Sacramento River Canyon to damage from accidental highway and railroad chemical spills definitely exists; the potential for chemical pollution is great.

Comparable to bacterial contaminants are nutrient inputs from farm and grazing-land runoff in the Pit River drainage, and sewage effluent from individual and domestic disposal. Resulting algae growth from these nutrients affects nearly all uses of the Lake, notably drinking water, aesthetics, recreation, and fishing.

Substantial sedimentation of the reservoir and resulting loss of usable surface area in the lake arms has not occurred. However, some silting in the upper reaches of certain stream inlets has taken place. Favoring the long life of this reservoir are the geologic stability and low erodibility of two of the three major drainage basins which comprise 87 percent of Shasta Lake's 6,421 square-mile watershed. In addition, the reservoir itself is designed with an enormous "dead storage" area, or area unaffected by water outflow regulation. A third factor is the addition of small upstream reservoirs after the construction of Shasta Dam in the early 40's. These impoundments, several of which are in the elevated sediment-producing area of the basin, now entrap material that would have flowed into Shasta Lake.

One still-active sediment source area borders the southwest side of the Lake. Extensive erosion, possibly the severest in California caused by man, followed complete denudation of vegetation on the steep slopes by fumes from smelter operations at Kennet, Coram, and Keswick in the early 1900's. The deadly fumes ceased with the smelter closures in 1921; Kennett is now under a great depth of water behind the dam and the other two are only historic townsites a short distance downstream from the dam. Two hundred thousand erosion control structures and five million hand-planted conifers and willows dot the landscape in a notable attempt to rehabilitate this area.

Mineral output from mine drainage such as the copper pollution of "Little" Squaw Creek on the west side of the reservoir; detergents from domestic sources; and high surface temperatures pose additional water quality problems.

In summary, these present and potential problems of bacteria, nutrients, and sediment are comparatively minor when compared with existing and potential turbidity, debris, and chemical-spill concerns.

5. TIMBER

While commercial timber stands do exist in the Shasta Unit, they are found in the more remote sections of the Unit on generally steep terrain such as the narrow confines of the Upper Pit River arm.

Because of the importance of these stands as scenic backdrop for the Lake and their present general inaccessibility, there has been little timber harvesting to date. There have been some small salvage sales carried on in areas where road access is available.

6. RANGE

There are no range resource values of consequence in this Unit. No domestic livestock permits are currently being issued. Although there is some potential for production of forage through vegetative manipulation, the more important scenic and recreation resource in the National Recreation Area preclude serious consideration of this Unit for development of range values.

7. WILDERNESS

During the roadless area review conducted by the Forest Service during 1972, the Town Mtn. area of 9,830 acres lying between the McCloud and Squaw Creek arms of Shasta Lake was inventoried.

In addition, portions of two other roadless areas which lie within the National Recreation Area were inventoried. The major portions of these areas lie contiguous to, but outside of, the Recreation Area boundary. These are the Backbone Roadless Area with 2,890 acres within the Unit, and the Devil's Rock Roadless Area with 2,640 acres within the Unit.

All three areas were listed as one unit in the final environmental statement pertaining to the selection of new wilderness study areas by the Forest Service. (No. 123, Region 5, Whiskeytown-Shasta-Trinity Nat'l., 15,360 acres, Quality Index 2-89.) This three-part unit was not selected as a new wilderness study area.

During the inventory stage of preparing this present land use plan, an evaluation of the Town Mtn. Roadless to determine its wilderness resource values was completed. (See Appendix K of the Final Environmental Statement for this Unit.) An important portion of that evaluation was directed toward a study of the boundary of the roadless area as it was reported in the final environmental statement on Roadless and Undeveloped areas. This ensured that no significant areas were inadvertently missed, which might have qualified it for the roadless inventory and that all the area which was included did qualify. Minor refinements in the boundary are described in the written evaluation--no major boundary changes were discovered during this review.

Because the main portions of the Backbone and Devil's Rock Roadless Areas lie outside the National Recreation Area, it was not feasible to inventory the wilderness resource of these small segments, and such action is being deferred until the major parts are studied.

8. MINERALS

Although the NRA legislation withdrew all public lands from further location, entry, and patent under United States mining laws, valid existing rights were recognized. No rights can be considered valid now unless they were valid at the time of the withdrawal (11/8/65). Mineral studies have not been made in this planning unit.

9. VISUAL

The prime visual attraction of the Shasta Unit is of course the Lake itself, set in a landscape of ancient lava flows and limestone bluffs which tower 3,000 feet above the lake surface and harbor many unique caves.

The crystal clear waters of Shasta Lake back up into four canyons. These arms account for most of the 365 miles of shoreline and the innumerable small coves and inlets for which the Lake is famous. Each arm has its own distinctive character.

The Sacramento Arm lies in the widest canyon, and is characterized by broad expanses of water between brushfields of manzanita dotted with occasional oaks and conifers. Much of the shoreline of the McCloud and the Squaw Creek arms is dominated by conifers. Developed campgrounds occupy the flats along the McCloud Arm, but the Squaw Creek Arm remains relatively undeveloped. However, man's influence is apparent in the scarred landscape which marks the site of the old mining town of Bully Hill.

The Pit Arm is characterized by steep, rocky canyon walls forming a narrow channel that winds up the Pit River Canyon from its confluence with the Sacramento Arm, to the head of the lake some 20 miles up the canyon. Because of this rugged terrain and because of the diversified vegetation patterns, this arm probably offers the greatest scenic variety, especially in the upper reaches.

Intrusions into the landscape such as Interstate 5 and the Southern Pacific Railroad line, are obtrusive because of their extensive land disturbance and because of the noise they generate.

Other intrusions such as the erosion caused by the old copper smelter north of the dam, are also objectionable to some visitors.

This Unit is most attractive during late spring and early summer when the water level is high and the streams are running full. As the water level drops, bare ground is exposed below high water level, detracting from the overall scenic quality.

Shoreline erosion and the resulting water turbidity caused by natural and man-made forces also detract from the overall scenic quality.

G. SOCIO-ECONOMIC ENVIRONMENT

1. ARCHAEOLOGICAL, PALEONTOLOGICAL AND HISTORICAL VALUES

Because of its very diverse fossil faunas, the area immediately north of Shasta Lake and generally lying between its McCloud and Pit arms has been rated by recognized leaders in the fields of paleontology and geology as perhaps California's single most important area for paleontologic research. Marine invertebrate faunas of Mississippian, Pennsylvanian, and Permian ages; marine invertebrate and vertebrate faunas of Triassic Age; and vertebrate faunas of Pleistocene Age all occur in this small area.

As early as 1878, J. A. Richardson located several caves in the McCloud limestone area and found the skull of what turned out to be an extinct bear in the Potter Creek Cave. In the period of 1902-1905 this cave, as well as Samwel Cave, were excavated under a University of California study which produced the remains of numerous extinct vertebrate fauna including ground sloth, short-faced bear, camel, peccary, scrub ox, mammoth, mastodon, and giant jaguar. Although both of these caves have been fully explored, additional known caves have not been completely examined, and there is still a potential for finding additional caves which would yield more material of important paleontological value related to Pleistocene age.

Most of the area of the Shasta Unit was a part of the ancestral territory of the Wintu, a subdivision of the much larger Wintun Indian Tribe of Northern California. Tribal boundaries are not precisely known, but the most easterly portion of the unit may have been a part of the Achomawi or Pit River Tribe. The Northern Yanas may also have controlled some miles of the south bank of the Pit River in the same area.

An archaeological survey of the area to be inundated by the Shasta Dam construction was made in 1941, along with a minor amount of excavation. Some thirty-seven aboriginal sites were mapped, of which thirty-one were on the McCloud arm where a relatively bountiful food supply was apparently available compared to the other arms.

Nearly all of the habitable terrain along the major arms of the lake was inundated. With generally only the steeper slopes remaining above high water mark, no great number of occupation sites could be expected to remain, and this is borne out by the fact that only eighteen sites are presently known and recorded.

Most pre-dam settlements of the white man which include the major historic sites of Kennett, Copper City, Fish Hatchery, Baird Indian Village, Heroult, Silverthorne Ferry, the Pit River Railroad, Bayha Resort were also located along the more favorable terrain of the river channels and were inundated. Bully Hill Mine and Copper smelter and its associated town is the only historical site of significance which remains above present water level.

2. LAND STATUS AND USES

The total area of this Unit is 134,505 acres of which 29,500 acres are inundated by Shasta Lake at the high water level, leaving 105,005 acres of land surface area.

Of this land surface area, approximately 94,418 acres are National Forest lands administered by the Forest Service and 10,587 acres remain in private ownership.

The extent of development of public lands is summarized in the following table.

Type of Use		No. Acres Occupied	No. of Uses
1.	Recreation Residence	58	4 tracts - 164 homes
2.	Resorts, marinas combinations including all commercial special use permits.	132	19
3.	Other recreation special uses, boat docks, etc.	25	11
4.	Utility corridor Interstate 5, railroad, major power lines.	1,030	
5.	Secondary roads		69.8 miles
6.	Public campgrounds		31 Total # 586 Camp Units
7.	Public launch		6 Total # 22 Lanes 901 Total Parking
8.	Bureau of Reclamation operations at Shasta Dam.	400	
9.	Other industrial operations, mines, etc.	30 Calaveras Mine	
10.	Other non-recreation special use permits.	Approx. 175	Approx. 50 Permits

3. PUBLIC SERVICES AND UTILITIES IN THE UNIT

LAW ENFORCEMENT

Law enforcement on the Shasta Lake Unit is performed by the Sheriff's Department of Shasta County. Water operations are

performed by the Sheriff's Lake Patrol; land operations are by the Resident Deputy Sheriff.

A portion of the funds for the Sheriff's Department are provided by the California Department of Boating and Waterways. The remaining portion is provided by the Forest Service, through annually renewed Cooperative Law Enforcement Agreements under the Sisk Act.

SOLID WASTE DISPOSAL

Final disposal of solid waste is not a major problem on the Shasta Lake Unit. The large volumes of such waste which arise at public campgrounds, etc., are collected by a contractor to the Forest Service and taken to an approved County dump; and private resort facilities provide for disposition of waste from their establishments. There are some problems in regard to adequacy of collection points, and the collection process itself, around the lake.

TRANSPORTATION

The outstanding feature of the local transportation environment for the Shasta Lake Unit is Interstate 5. This artery, which bisects the Unit, provides superb access to the NRA. However, the County is still confronted with problems of budgeting for the maintenance and improvement of secondary roads.

The Federal Highway Administration has indicated there are no proposed projects which will increase the access to this Unit.

The California Department of Transportation has also indicated that the present level of funding indicates little possibility of new highway projects in Northern California. Therefore, the character and capacities of the existing State highways will not appreciably change in the next 20 years.

Shasta County has done an adequate job in confronting the problems of budgeting in the past for the construction and improvement of the numerous secondary roads which traverse the area, and must be depended upon to meet the challenge of funding for the future needs of what will essentially be maintenance and improvement tasks for the existing routes.

D. ISSUES AND OPPORTUNITIES OF CRITICAL CONCERN

There is still concern that some areas of Shasta Lake will become overcrowded with various boating and related activities. There is feeling that the numbers of houseboats and similar large boats may become excessive, and be in conflict with other uses of the lake. Powerboating conflicts with other lake recreation uses in specific areas. High-performance powerboats generate noise levels which clash on the natural setting and operate at high speed in congested areas. Presently there are more private houseboating opportunities than public houseboating opportunities. All overnight private houseboat permits are only available upon purchase of an existing houseboat with permit. Trailerable houseboats may be placed on the lake for up to 30 days without a permit. All overnight vessel use has not been regulated. The number of mooring coves is limited. The size of boats on the lake is increasing.

Sub-standard sanitation facilities on some boats create spot-pollution problems. The lack of lake surface sanitation facilities for boaters is causing pollution problems.

There is conflict between fishing and other uses of the lake (primarily water skiing and houseboating) in areas which fishermen regard as established favorites high-producers. The lake boating restriction plan has not been fully implemented.

There are no developed swimming sites. There is potential for both floating and shoreline swimming development.

Navigational hazards, especially those created by varying the water surface level, are not adequately marked. Obstruction such as log booms are inadequately marked to be visible both day and night. Accidents are frequent resulting in injury, damage to property and sometimes personal injury.

Some existing developments on private lands - such as signs, structures, and types of commercial activities - do not conform to County zoning regulations. Potential residential or resort development on some parcels of private lands would destroy National Recreation Area Scenic, watershed, archaeological or historical values.

The number of developed camping sites on public land is insufficient to meet the average summer-weekend demand. Most camping facilities on public land do not meet the standards of development expected by the using public. It is not feasible to bring some of these sites up to such expected standards.

During periods of low water some boat ramps become unusable. Camping continues to be popular in concentrated spots along the shoreline with resultant pollution and intrusion of the scenery.

There are problems of pollution, solid waste disposal, and fire and resource damage attributable to dispersed camping on public lands

along the lake shore. Dispersed camping in some locations is creating conflicts with other resources or other uses.

Some present use of off-road vehicles within the Shasta Unit is causing unacceptable soil, vegetation, aesthetic damage.

Development activities are reducing and affecting some wildlife habitat areas; habitat improvement measures are needed to sustain existing populations. Developments and public use are definitely affecting and, in some cases, threatening the habitat of the southern bald eagle, the Shasta salamander, and the osprey. But there is a lack of specific knowledge of these species' habitat needs, and the impact of recreation use on them is not fully understood. There is insufficient awareness and sensitivity by people regarding the known needs of the Southern bald eagle, the Shasta salamander, and the osprey.

Existing trails in the National Recreation Area are inadequately maintained. Some additional trails are needed to meet public needs.

There is no clearcut policy to guide the nature and extent of private developments of public-use facilities on public land under special-use permits.

New types of recreation activities are starting at Shasta Lake. Some are appropriate while others are unsafe and incompatible with the forest environment or conflict with other uses.

Existing resorts and marina's need to expand to meet the needs of the recreating public. Expansion or new services provided must be appropriate for forest recreation and the intent of the NRA.

Law enforcement problems are increasing each year. There is a growing public concern for protection of personal property and personal safety.

E. ASSUMPTIONS

Boating use will not significantly exceed 2,000 boats per day on holiday weekends, due to marina and ramp parking constraints.

Houseboating will continue to be an outstanding recreation use of the lake because of the lake's conformation (a long shoreline with many bays and coves), and the comfort and convenience of the modern houseboat which promote a wide array of lake surface and shoreline activities.

Fishing quality (measured by fishing success) will continue to deteriorate under increasing fishing pressure but will be offset only partially by habitat improvement measures, a modified fish-planting program, or reduction of creel limits.

Non-power boating use will increase but continue to be only a minor water-surface use. Swimming in undeveloped sites, primarily from boats, will continue to be a significant use of the lake.

There will be a continuing demand to use private land for residential development, resorts, and associated commercial facilities.

There will be an increasing demand for developed camping facilities on public lands at development-scale up to Level 4. (See Appendix for description of development scales.) Level 4 and 5 camping facilities on private land -- including cabins, motels, and trailer parks -- will play an increasing role in meeting public needs, both within the NRA and nearby.

The demand for dispersed camping, a popular recreation experience along the shoreline of Shasta Lake, will continue to increase.

The value of wildlife to the public will continue to increase, for both hunting and aesthetic appreciation.

There will be a continuing conflict between human use of the Shasta Lake Unit and use by the southern bald eagle, Shasta salamander, and osprey populations.

The potential for expanded trail system on the Unit is somewhat limited by steep topography, dense vegetation, and high temperatures.

There is little public interest in the wilderness potential of the inventoried roadless areas, but they feel there are paleontological and archaeological values in these areas which need special recognition in management.

Day use of the Shasta Unit, by local residents or transients who use overnight facilities outside the Unit, will continue to be a large part of the total use of Shasta Lake (it constitutes approximately 40% today).

III. MANAGEMENT DIRECTION

Manage for boating use to increase from 1,100 boats per day to an estimated 2,000 per day (in-season average). When use reaches planned capacities, initiate a procedure for control of the boating use.

Continue to limit boat size.

Place an upper limit on the average overnight use of houseboats at 450. Place an upper limit on the average overnight use of all types of boats, including houseboats at 780.

Encourage development of swimming opportunities in the following order of priority:

1. Floating swimming pools at existing resort-marinas.
2. Bouyed coves.
3. Suitable beaches.

In cooperation with the California Department of Fish and Game, strive to maintain a fishery consistent with the demand, recognizing that there are habitat limitations which cannot be overcome.

Utilize volunteers (organizations and individuals) to the greatest extent possible in the operation of the NRA. Initiate community projects.

Recognize that non-powerboating use (including swimming in undeveloped sites and from boats) will continue, but make no specific allocation by zoning of water surface for this use.

Acquire those parcels of private land which are specifically needed: (1) for public development, (2) to protect key visual resource values (3) to protect key wildlife habitat, and (4) to preserve and make available for public enjoyment the important cultural values.

Acquire scenic easements where portions of private land developments may intrude on travel zones.

Allocate no additional public land for recreation residence purposes.

Continue existing recreation residence tracts (under special-use permits) unless that use generates excessive interference with public use of the lake or unacceptable environmental damage such as pollution.

Ensure that all paleontological, archaeological, and historical values are searched for and evaluated. Give full consideration to preserving, restoring or maintaining these values before proceeding with any resource use and/or development.

During planning and construction of all developments on public lands, meet the same standards as those prescribed for private-land zoning and development in the Secretary of Agriculture's regulations.

Restrict recreation road construction to that needed for access to planned developments or improvement of existing routes.

Ensure that the needs of the handicapped are met by (1) modifying existing facilities to meet the number of anticipated handicapped users, (2) giving full consideration to their needs in planning additional facilities.

Attempt to meet the average summer-weekend needs for camping facilities on public lands at the development scale of Level 4 for auto-access units, and Level 2 or 3 for boat-access units. The planned need for these facilities is 300 additional units during the plan period.

Allow only those uses which will utilize the surrounding environment in its natural state to the greatest extent possible and serve to complement water oriented recreation activities.

Encourage private-land development of all level-5 facilities, including cabins and trailer parks.

Continue Lakeshore as a commercial center, but continue to recommend to the County that no additional areas be zoned for this purpose.

Sustain or increase existing wildlife populations. Maintain and restore self-sustaining populations of osprey, southern bald eagle and Shasta salamander over these species' former ranges. Avoid all activities or developments which would result in the destruction of the habitat of these species.

Plan no regulated timber harvest, and restrict harvest of timber to salvage material in presently accessible areas. Limit salvage within the scenic management-unit to those trees which are a safety hazard to the using public.

Schedule reviews of this plan at six-year intervals following adoption of the final plan. Such reviews will cover all aspects of the plan to determine its viability under prevailing conditions, and will indicate any needs for revision. Public viewpoints will be solicited in various ways, including public meetings.

IV. IMPLEMENTATION PLAN

1. General Water Management and Zoning

Mark navigational hazards, both man-made and natural, the agency feels are serious threats to the boating public in main channels and major use areas.

Publish and distribute hazard charts for boaters, showing fixed hazards including trees. Emphasis will be placed on better informing the public of possible unmarked hazards, as it is impossible to mark all hazards, especially trees.

Continue to provide sanitation units as needed for the boating public. Increase the number of floating toilets on Shasta Lake to 12.

Recommend a County ordinance requiring inspection of all vessels equipped with sanitation devices. All such vessels will be inspected on a regular basis by the Forest Service or the Shasta County Sheriff's Lake Patrol, or their representative.

Require that all vessels unoccupied for periods in excess of 24 hours be stored only at approved moorage sites.

Set a maximum length of 50' and a maximum width of 15' for any boat on Shasta Lake, except for special uses under permit. Insure transportability to and from Shasta Lake on State highways.

Prohibit residential occupancy on the lake surface for continuous and/or intermittent periods in excess of 30 days per season.

Increase enforcement of boat noise regulations under existing state law.

Recommend the following amendments to the County boating ordinance as needed:

(1) addition 5 m.p.h. zones as designated on the map;

(2) Prohibit water-skiing in the following areas:

Pit River arm above Browns Canyon - Implement 82/83 season
Salt Creek Inlet from Homeowner's tract East - Implement 82/83 season
Squaw Creek arm above a point approximately at Winston Gulch
McCloud arm above Moore Creek
Sacramento arm above Antler's Resort
O'Brien inlet from east of Skipper's Cover Eastward to 5 mph zone

Continue lake sweeping operations and, if feasible, capture debris at entry points to the lake.

In recognition of the mutual validity as well as the mutual conflicts between domestic-water-system intake requirements, and public recreation use on the lake:

(1) Ensure the future water-intake installations will not require further closure of areas to general public-recreation use of the surface;

(2) Recognize that future construction of recreation facilities on or near points of water intake may have to be subordinated to this valid right to use the lake for domestic water purposes.

2. Water Use Facilities

Improve existing launch facilities as follows:

(1) Improve Bailey Cove Ramp

(2) If feasible provide for small boat launching in the Upper Pit arm at Sugarpine Canyon.

Permit expansion of commercial moorage to a total of 2,800 slips under development plans and schedules to be completed with each marina which reflect public needs.

Maintain existing private moorage which is under special use permit, and periodically review to determine whether such private moorage is interfering with public use. Issue no new special-use permits for this type of use.

Encourage the private development of dry land boat storage where feasible.

3. Powerboating (Including Water Skiing)

Emphasize powerboating in the Shasta Unit by confining restrictions to only those needed for:

(a) control of noise levels
(b) recognition of other water-recreation-use needs
(c) assurance of safety (as already discussed under General Water Management, and as shown on the map)

Recommend to Shasta County establishment of a speed limit for Shasta Lake with a provision for a zone set aside for unlimited speed.

4. Lake Surface Overnite Occupancy Control

Emphasize houseboating by confining restrictions on such usage to only those needed to balance this use with other major water surface uses, as follows:

(a) If needed close off certain narrow inlets of the main arms of the lake to houseboats from May 15 to Sept. 15 annually as follows:

On the Sacramento arm, the area beyond upper Middle Salt Creek
On the McCloud arm, the area beyond Pine Point
On the Squaw Creek arm, the area beyond Didallis Creek tract
On the Pit arm, the area beyond Stein Creek

(b) Continue a permit system for all private houseboats - do not increase private houseboats numbers over current level of 476 and which are berthed in approved moorage areas on Shasta Lake. Enforce standards of sanitation and appearance for these vessels.

(c) Manage to limit average overnight use of houseboats to 450.

(d) Manage to limit average overnight use of all boats to 780. Once average overnight use reaches 780, implement a system to keep use within this limit. This average use shall be determined by randomly sampling 2 week nights and weekend nights use (excluding holidays) between June 15 and August 15.

(e) Issue prospectus for expansion of existing commercial houseboat fleet by 53 vessels, under existing or renewed resort-marina special-use permits for a total of 446 houseboats.

Allocate these on the basis of individual resort proposals which must be be submitted within two months of the approval date of this revision.

Recommend a County ordinance which requires installation of approved sanitation devices on all boats designed for overnite occupancy.

5. Fishing

In collaboration with the California Fish and Game Department, analyze fish habitat improvement measures such as the current project of tree-falling into the lake in selected coves to improve the bass habitat. Incorporate these measures into the fish habitat management program when they prove to be feasible and successful.

Make recommendations to the Department of Fish and Game for changes in fishing regulations when these will assist in sustaining the fishery.

6. Swimming

Where feasible, encourage development of swimming opportunities (shoreline or floating).

7. General Land Management

The public lands in the Shasta Unit are divided into "management units" as follows:

(1) Scenic - The area which includes the immediate foreground around the shoreline of the lake, the immediate foreground along all significant land travel routes, and all lands presently developed or planned for development for recreation purposes.

Management in this part of the Unit will be to preserve the scenic and aesthetic values by permitting only minimal modification of the natural forest setting.

(2) Multiple Resource Management - This designation includes the greater part of the land acreage of the Unit where management of the wildlife, watershed, and timber resources will occur together with dispersed recreation use. Developments other than roads and trails are not contemplated in this area.

(3) Special - These are areas which feature archaeological, paleonotological, and historical values which are to be preserved. Management here will favor permitting public use and enjoyment by the public, without jeopardizing these basic values. Only developments which will facilitate the public use for recreation and education with that constraint will be constructed.

(4) Explorer - This area features the natural forest setting with developments limited to foot trails accessible from existings roads to the lakeshore.

Archaeological and paleontological values found in this area will be given special considerations to preserve these values. The Shasta Salamander will also be given special consideration.

Manage the Town Mtn. roadless area as part of the Explorer Management Unit with adequate safeguards for its value as habitat for the threatened Shasta Salamander and known archaeological and paleontological values. Consider vegetative manipulation measures where feasible to enhance deer and elk habitat.

Continue managing the portions of the Backbone and Devil's Rock roadless areas which lie within the NRA boundary as roadless areas until the contiguous major portions outside the NRA have been studied.

8. Land Acquisition

Acquire the private lands shown in the Appendix for the indicated public purposes, as they become available. Wherever possible, land exchange will be favored as a method of acquisition in lieu of direct purchase. This limitation on acquisition would be waived, and additional property would be acquired, should non-conforming uses deleterious to the goals and objectives of the National Recreation Area become imminent or actually occur.

Other land ownership adjustment within the NRA will be accomplished, wherever possible, using land exchange procedures.

Acquire scenic easements where portions of development would detract from the visual resource in travel zones.

9. Private Land Development

In cooperation with Shasta County, permit private-land developments that will maintain or enhance National Recreation Area values.

Participate with Shasta County in the formation of an architectural review board which will guide all future private land development in the Unit.

Cooperate with Shasta County in establishing specific target dates for phasing out the non-conforming uses on private land which are defined by the County zoning ordinances.

Participate in planning with owners or managers of travel and utility corridors through the NRA (railroad, Interstate 5, and major power lines), to minimize the visual impacts of these corridors on the aesthetic value of the National Recreation Area.

10. Public Recreation Facilities and Use

Encourage the Shasta County Planning Commission to participate in a review of Forest Service planning and development programs including both public and private investments.

Existing facilities in key recreation use areas will have first priority for rehabilitation and expansion.

Once rehabilitation and expansion of existing facilities is completed, construct 300 additional campground units on public lands, at such locations as may be determined by recreation or specific project plans.

The majority of the campgrounds will continue to be closed in the off-season in order to stay within current operating budgets. In selected campgrounds, standards will be reduced for cleaning, operation, and maintenance to finance longer open seasons.

District Ranger will examine the feasibility of allowing certain Forest Service facilities (such as campgrounds) to be operated by concessionaires. Increase the availability of recreational vehicle dump stations.

Retain existing recreation residence tracts. At the time of scheduled reviews of this plan, the impact on the environment and the effect on other public use of these tracts will be remeasured as the basis for a continuing reevaluation of this decision.

Retain the number of resorts and resort-marinas at the present level.

Allow expansion of existing resorts, marinas or combinations of these public use facilities under the following guidelines:

a. Existing facilities or new facilities must be for the purpose of furthering the recreation potential of the lake and its environs within the limits of total use as projected by the entire plan.

b. Commercial services at existing resorts will be allowed to expand, furthering the recreation potential of the Lake, but staying within the total use and environmental controls projected by the plan.

All expansion must be integrated with and utilize the surrounding environment in its natural state. Carnival type activities will not be permitted. Uses on the land surface surrounding the lake must serve to complement the outdoor water and Forest oriented recreation activities rather than being an end in itself.

c. The facilities proposed must be for the purpose of fulfilling a then-existing need by the public for utilizing the natural recreation resources of the area for short term recreation (periods of 30 days or less).

d. Resorts which maintain a marina in shallow water ports should relocate in order to provide a viable economic entity and consistent good public service. In the interim a plan will be developed for low water operations, showing areas resorts can relocate for short periods of time. District Rangers will work with these resorts to find a permanent relocation site with deep water capabilities.

Effect controls on all dispersed camping to bring resource damage within acceptable limits through an education program, and administrative regulation. Continue dispersed auto access camping within ¼ mile of lake shore only until suitable alternative facilities become available.

Continue dispersed boat access camping in this unit with appropriate controls.

Close areas to dispersed camping as necessary adjacent and contiguous to existing campground, resorts, marinas, private land developments, or where such use conflicts with wildlife or other resources. Establish camping stay limits as appropriate.

Controls will be implemented in three steps as necessary:

1. Assess all use areas and identify unsuitable areas if any.

2. Close or relocate unsuitable areas.

3. Develop minimum facilities at suitable areas to protect the environment and provide for user safety.

Provide high quality maintenance on existing trails and determine the need for additional recreation trails.

11. Wildlife

In cooperation with the California Department of Fish and Game, develop wildlife plans which may include habitat-manipulation measures where scenic or other NRA resource values will not be impaired.

Identify the impacts of developmental projects on wildlife populations and minimize these effects by changes in efforts.

Continue research and studies of the osprey, southern bald eagle, and Shasta salamander, with the objective of refining information concerning habitat requirements, range of the species, and the impacts of human use on each species.

Restrict human use and development in known areas of occupied habitat of the osprey, southern bald eagle and the Shasta salamander, and implement changes as new information indicates the need.

As necessary, map and sign the areas which are closed to protect the southern bald eagle and osprey populations. Manage such areas in accordance with habitat management considerations developed specifically for each species and/or territory.

Map the range of the Shasta Salamander and implement restrictions necessary to avoid degrading the habitat.

Educate the public concerning the special habitat needs of the bald eagle, osprey and Shasta salamander populations by incorporating this information in all Forest Service information and education programs.

12. Archaeological, Historical, Paleontological

Take action needed to preserve, restore or maintain areas according to the values found prior to permitting any resource development or use to occur.

Incorporate these cultural features into visitor interpretive programs as a part of the total recreation experience of the user where such action will not endanger or destroy the features themselves.

Make the reconnaissance survey and evaluation process a part of the project planning process in any area where resource use and/or development is planned before the complete unit has been surveyed.

13. Off-Road Vehicle Use

Allow off-road vehicle use only in areas where such use will not create unacceptable soil, vegetation or aesthetic damage, and is in conformance with the Forest ORV plan.

14. Timber Resource

Plan no regulated timber harvest and limit unregulated timber harvest to accessible areas. No roads, either temporary or permanent, will be constructed for timber harvesting.

Manage the timber stand to prevent significant losses due to insects or disease.

Timber harvesting in the Scenic Management Unit will be limited to cutting methods that meet retention* standard for visual resource quality. Maintain a wide variety of species and size classes generally prevalent throughout the unit. Complete slash cleanup will be required.

In the Multiple Resource Management Unit, timber management activities within the middleground and background areas seen from Sensitivity Level I viewpoints will meet the visual resource quality objectives for partial retention.* On the remaining areas timber management activities will meet the visual resource quality objectives for modification.*

In presently unstocked timber sites in the Scenic and Multiple Resource Management Units where recreation, scenic and wildlife values will not be impaired, silvicultural treatment including replanting with commercial timber species may occur.

15. Other Resource Activity

Determine what mining claims still exist within the National Recreation Area, program mineral examinations, and proceed with contest action where the claim is lacking in sufficient minerals to warrant development.

16. Visitor Information Activities

Plan a program of information services with emphasis to provide dispersal of information to the forest user such as where to go, what to do, and what to see -- as well as user's responsibilities to the land and its resources.

Develop portal information opportunities at key entrance points and on the lake.

Solicit assistance from volunteer groups to disseminate information.

Provide interpretive services to aid recreation visitors in identifying themselves with the historical and cultural past, as well as contemporary Forest Management programs.

17. Volunteers

Increase the use and support of volunteers in all phases of NRA Management with emphasis on local volunteer fire and rescue units as well as Coast Guard Auxiliary, Chambers of Commerce, boating and fishing associations.

*See Volume II, Chapter I, National Forest Landscape Management, April, 1974.

CLAIR ENGLE-LEWISTON UNIT

A. NATURAL ENVIRONMENT

1. LOCATION AND GEOGRAPHICAL SETTING

This Unit lies 20 miles due west of the Shasta Unit in the Coast Range. The reservoirs were formed by dams built along the Trinity River to impound and divert Trinity water to the Sacramento Valley for beneficial use there.

Main access to the Unit is provided by State Highway 299 to Weaverville, thence via Highway 3 which parallels the Unit along its west side. Most users from the large population centers of Southern California and the San Francisco Bay area travel Interstate 5 to Redding; in the ensuing 45 miles to Weaverville, they encounter the slow, mountainous portion of Highway 299 over Buckhorn Summit all of which makes this Unit about 1½ hours farther for these visitors than the Shasta Unit. Some users from the coastal areas of Eureka and Crescent City travel Highway 299 from the coast, encountering many slow, winding portions. Some users from the north arrive via Highway 3; it, too, has a slow segment over Scott Mountain.

2. BOUNDARY AND PHYSICAL DESCRIPTION

In this Unit, the dominant elements of the landscape are Clair Engle Lake (16,400 acres at full elevation) and Lewiston Lake (750 acres) out of a total acreage of 77,500 acres.

Sufficient land acreage lies within the legal boundaries of the Unit to provide the facilities needed by the public to fulfill the basic purposes of this Unit of the National Recreation Area. As with the Shasta Unit, ample additional acreage has been included to provide protection for the scenic and other desirable attributes of the total environment.

Here, too, the boundaries as originally established have proved to be correctly located to accomplish the purposes and objectives of the legislation. No changes are recommended.

3. CLIMATE

Although this Unit has the typical rainless period each summer, the somewhat higher elevations and a degree of coastal influence combine to moderate the hot temperatures found in the Central Valley. Temperatures during the summer period are pleasant for most types of outdoor recreation activity, with daytime highs normally ranging between the upper 60's to 100°F, and averaging high 80's. Nighttime temperatures are cool, dropping to the 40's and 50's. Gentle winds prevail during the recreation season.

Although weather may be pleasant for short periods between late fall and early spring, winter outdoor recreation is generally severely restricted.

Hunting and fishing are the only activities usually attempted outside of the main season, but this use is rather limited. Snow often covers the area from mid-December to mid-March, with snow often up to two foot depths covering the Unit for most of this period. March winds are quite strong, limiting an otherwise partially favorable use-period. Minimum winter temperatures fall near 0°F, with daytime readings near freezing. Precipitation predominately occurs as rain, but a significant amount is contributed by snow. Eighty percent of the 40 to 50 inches of precipitation is distributed in the 6-month period between November 1 and April 30.

4. LANDSCAPES AND GEOLOGY

Landscapes of the unit are mostly semi-mature to mature, highly dissected, moderate to steep, mountainous terrain. The topography of much of the eastern half of the unit is more rugged than the western half. Most developable lands are found adjacent to the Western shorelines. Some areas to the west of Clair Engle have been affected by glacio-fluvial outwash from the highly glaciated topography along the eastern edge of the Trinity Alps. The outwash material has formed gently sloping stream terrace landforms along the major streams which flow eastward into the reservoir. Many of the landscapes along the western side of the reservoir have a geologic history of landscape instability, as evidenced by their unusual hummocky landflow topography. Mass land failures have occurred in some of these areas, especially where they have been critically disturbed through road construction activities. Generally, the topography of the east side of the reservoir is more stable than the west side.

Similar to the Shasta Lake Unit, the geology of this unit is comprised of Klamath Geologic Province formations. The east half of the unit is almost entirely composed of marine sedimentary and metasedimentary geology of the Mississippian period (345 million years old). This is locally known as the Bragdon Formation. Associated and intermingled with the Bragdon Formation are some small-area bodies of Devonian and pre-Devonian period metamorphosed volcanic geology (400 million years old), locally known as the Copley Greenstone Formation.

The southwestern section of the unit (southwest and north of the Stuart Creek arm) is largely comprised of Oligocene epoch (36 million years old) non-marine sedimenatary rocks, locally known as the Weaverville Formation.

Along the west side, from the Stuart Creek arm to the northernmost tip of the lake, there are extensive areas of ultra-basic serpentinized rocks. These, and the Weaverville Formation bedrock,

are prone to much land mass movements and present extreme difficulties for road location and construction.

Also, toward the southwestern section of the unit (adjacent and north of the Stuart Creek arm) there are some sizeable bodies of Mesozoic-era granitic rock which extend within the NRA boundary.

5. SOILS AND VEGETATION

The soils associated with the marine sedimentary, metasedimentary, and metavolcanic rocks dominant on the eastern portion of the unit vary considerably in characteristics depending on local slope, aspect, and general landform. Soils found on the sharp ridges and steep south and southwest exposures are normally shallow (less than 20" deep), very gravelly loam-textured soils. They support sparse, low-site, mixed conifer timber associated with shrubs and canyon live oak. These soils are only low-to-moderately susceptible to surface erosion when disturbed by man's activity. Soil developed on the same geologic bedrock, on gentle slopes (0 to 30%), and/or northerly exposures on steeper slopes, are usually moderately deep to deep dark-reddish-brown loam-textured surface soils, and reddish-brown clay loam to clay subsoils. They normally support good-to-excellent-site mixed-conifer timber and shrubs.

Soils developed on the non-marine sedimentary rocks (Weaverville Formation) are variable in characteristics (such as gravel content and color), but they all are moderately deep to deep (20" to over 40" in depth), and characteristically have loam surface soils and clay loam to clay subsoils. They support good-to-excellent stands of mixed-conifer timber and shrubs, including hardwoods of black oak and big leaf maple. These soils normally have only moderate-to-low surface erosion hazard after disturbance, but they are susceptible to mass land failures.

Soils formed on the ultrabasic serpentinized bedrock are also variable in depth and gravel content as well as color. Extensive areas of shallow, very bouldery soils composed of reddish-brown surface soils and brownish-red clay to clay loam subsoils, are common to the ultrabasic formation. These soils support poor-site, sparse, open stands of mixed-conifers and shrubs. The associated species are Jeffrey Pine, incense cedar, sugar pine, and minor amounts of white fir and Douglas-fir. An imbalance of the soil calcium-magnesium ratio has caused a nutrient-status problem, with the result that only those species which can tolerate the condition are able to exist. Other deeper soils developed on the ultrabasic rocks - not so affected by the nutrient imbalance - do support fair-site mixed-conifer stands, along with hardwoods and shrubs. The deep reddish-brown surface soils underlain with red to brownish-red clay subsoils, are most commonly associated with unstable land-flow areas and are highly susceptible to mass land failures initiated by man's activity, especially road construction.

Soils found on the granitic bedrock areas vary from shallow to deep grayish-brown sandy loam surface soils, with gray to yellowish-brown, sandy loam to clay loam subsoils. These soils are highly susceptible to surface erosion when disturbed by logging operations or road construction.

The California Native Plant Society has listed only one species of plants in the Unit in their inventory of rare and endangered plants:

> Erigeron flexuosus, Trinity Alps Daisy identified in three locations within this Unit, although one location near Alpine View Camp is believed to have been inundated by flooding from Clair Engle Lake. The remaining two locations from pre-1945 collections are along the Stuart Fork arm to the west of the Highway 3 bridge crossing the Stuart Fork arm.

This species has been reported to Congress by the Smithsonian Institution as being threatened or endangered.

6. AIR

Air quality in this Unit at the present time can be considered as excellent. The entire North Coast Air Basin (which includes the Unit) has a relatively small proportion of the total pollution problem in California. The following table shows the proportion of air emissions in the Basin, expressed as a percentage of total statewide emissions.

Organic Gases	2.3%
Oxides of Nitrogen	1.6%
Carbon Monoxide	3.3%
Sulfur Dioxide	0.8%
Particulate Matter	7.4%

The only industrial activity carried on in the Unit is logging on both the National Forest lands and private lands. The total population of Trinity County at the present time is 11,800 people in a total County area of 2 million acres (3,500 square miles).

Present recreation use adds approximately 1,500 people to the Unit on an average summer day, which is still a relatively sparse population of 12 people per square mile. Motorized activity is primarily carried on for ingress and egress to the Unit. On the scene, motorboats and campfires are the main source of air pollution - but neither source appears to be significant at this time.

Highway 3, which borders and crosses portions of the Unit on its westerly boundary, is the only through route in the Unit, but it does not carry a significant amount of such traffic, and hence does not add measurable pollution.

B. NATURAL RESOURCE CHARACTERISTICS OF THE NATIONAL FOREST LANDS WITHIN THE UNIT

1. RECREATION

Here, too, the recreation attraction which dominates the scene is the two lakes - Clair Engle with 16,400 acres of water surface, and Lewiston Lake with 750 acres.

The shoreline of the larger lake is moderately long (145 miles) but it does have a substantial number of coves and bays to provide the seclusion sought by many. Both lakes retain an almost complete rural outdoor atmosphere with little development visible.

In addition, the generally forested terrain and the magnificent backdrop of the Trinity Alps combine to form an area that is especially attractive for all forms of outdoor recreation. Because the main feature is the water surface, water related recreation activities remain the overwhelming favorites. However, the combination of attractive terrain and a warm, dry summer climate generates a strong demand for many activities on the land.

Lewiston Lake displays a contrasting picture to the recreationist. The low temperature of the water resulting from drawing water from the lower levels Clair Engle Lake makes the lake essentially unavailable for water contact sports. Powerboating within the long, narrow conformation of the surface could have resulted in safety problems, but these were forestalled by an early adoption of a 10 mph speed limit for the entire lake. The slightly lower elevation and narrow, south-facing confines of the general area of the Lake results in higher air temperatures which lessen its use during the three main summer months. There is no demand for houseboating on this relatively small lake.

Powerboating and water skiing use on Clair Engle Lake now averages 124 boats per day. Because of the higher elevation, temperatures are slightly cooler than Shasta Lake, but are still well within the range of comfort for summer use. However, the season does not exceed a 100 day period for any sort of body contact use. This lake activity will continue to increase as the lake becomes better known.

Houseboating is also popular here, but it has not developed as rapidly or to the extent as at Shasta Lake (average daily use is 50 vessels). This lower amount of use can partially be attributed to being less well known; but there are also only a limited number of coves and bays where the seclusion necessary to enhance this activity can be found. Some expansion could naturally be expected to occur, but demand may never be very large.

Rainbow trout dominate the fisheries in both lakes. Also, there is some warm water fishing available on Clair Engle Lake consisting mainly of small mouth bass. Because of water temperature stratification on Clair Engle and previously mentioned factors on Lewiston Lake, the best fishing on both lakes is available in the

spring and fall. Probably the best known species to the angler on either lake is the Kokanee salmon because of their bright spawning color and high table quality.

Swimming in Clair Engle Lake is an important part of the total recreation experience and is particularly popular in developed sites. Developments are essentially dependent upon the addition of sand or decomposed granite to cover the natural ground surface both above and below waterlines which ordinarily either is rocky, covered with red mud or some combination of these undesirable features. Some swimming does occur in connection with houseboating and powerboating.

Sailboating does occur to some extent in certain areas of the larger lake at times when good wind conditions prevail. But other non-powerboating activities (rafting and canoeing) are practically non-existent.

Over the entire Unit with its forested environment, camping is a recreation experience in itself which great numbers of people enjoy without making use of the water surface except as it enhances the natural scene.

Dispersed camping by boat does occur in the Unit but not to the degree or amount that it occurs in the Shasta Unit. More of the lakeshore has road access with the same attraction as boat access. The generally lighter use of the Unit permits the same degree of seclusion with auto-access dispersed camping.

Hiking does occur in the Unit and there are many attractive spots for this activity on or near the lakeshore. However, this use is not a major activity because the person seeking the experience opts for the adjacent hiking trails into the Salmon-Trinity Alps Primitive Area.

The hunting that does occur in the Unit for bear, deer, quail and waterfowl generally occurs outside the main recreation season; it does not form any large part of the visitor day use.

The Whiskeytown and Shasta Units are geographically close, and their recreation resources are closely associated. Despite the fact that the Clair Engle-Lewiston Unit is geographically separated from those two Units, there are aspects of 3-way coordination which have been described in the Final Environmental Statement for this Unit.

2. WILDLIFE

This Unit also supports a considerable number of species of bird, animal, and reptile life, similar to the Shasta Unit, although the habitat does show considerable differences. It, too, remains largely undeveloped although a considerable portion of the area has had some form of timber harvest. The slightly higher elevation, somewhat less rainfall, and overall lower temperatures, have

resulted in an almost uniform coniferous forest cover on the south-facing slopes.

The construction of the Reservoir and the resulting inundation of the range had a severe impact upon the wildlife population. In contrast with the Shasta Unit, the consequences here are much better documented.

Although deer are still present, the Weaverville herd was reduced from pre-dam estimates of 6-8 thousand, to a fraction of that number. About half of the carrying capacity of the critical winter range was inundated. In addition, the new lake isolated the remaining ranges, making access very difficult. Limited opportunities are now available within the Unit for vegetative manipulation work which might enhance the deer habitat. The further constraints imposed by the legislation which favor aesthetics and mass recreation would make many of these infeasible.

Recognition of fish and wildlife losses sustained by construction of the project had led to the formation of the active Trinity River Basin Fish and Wildlife Task Force whose goal is to define these resource declines and recommend suitable measures to mitigate these losses when possible. The Task Force presently has membership which includes the Forest Service, California Department of Fish and Game, US Bureau of Reclamation, US Fish and Wildlife Service, US Bureau of Land Management, Trinity and Humboldt Counties, and the Hoopa Indian Tribe.

Black bear are very common throughout the Unit; their naturally ample food supply is often supplemented by foraging through campground garbage cans and recreationists' supplies. It is accepted practice to bait and trap and relocate specific animals when such marauding becomes obnoxious or appears to be a menace to the public.

There are two known active pairs of the southern bald eagle in the Unit. Although there was a loss of suitable habitat resulting from dam construction, which also cut off the large anadromous fishery, the new habitat is generally suitable for the eagle population. Kokanee runs in the fall of the year to attract the eagles, and as many as 20 have been counted in one tributary of the lake. Any proposal for lake management will have to seriously consider the known habitat needs of this species. Much is known regarding such needs as a result of past studies in both the Shasta Unit and this Unit. However, in both units the most important single factor which may affect the habitat is disturbance by people. Little is known regarding the amount of such disturbance the species can endure and still be able to maintain its population or increase in numbers--other habitat conditions remaining favorable.

Mountain quail are found in the Unit as well as rabbits, gray squirrels, a few mountain lions, coyotes, and bobcats. Although there seems to be reason to believe that pine marten and wolverine

might be in the Unit, no direct evidence has been found, nor have any sightings been reported.

There are three heron rookeries on Clair Engle Lake and a small waterfowl population on Lewiston Lake. Although no territories have been discovered to date, there is some ideal habitat present for the spotted owl, and continuing studies of this species will probably reveal some pairs.

3. FISHERIES

Clair Engle Lake supports both a cold and warm water fish species. Contributing to this dual capacity is the fact that the water is stratified thermally from April through November. Surface water temperatures reach the high 60's in early summer and fall, and often peak out at 75 degrees in August. These summer temmperatures create the ideal conditions for other water sports such as boating, swimming, and water skiing, but do lessen the fish success potential. There is not as much conflict in total water use, however, as might be expected since the better fishing is in the spring and fall when other usage is low.

The following creel census data collected by the California Department of Fish and Game gives a limited picture of the Clair Engle fishing.

Species	Catch
Rainbow Trout	399
Kokanee	287
Silver Salmon	406
Smallmouth Bass	46
Largemouth Bass	2
	1,140

The information is based upon a creel check of 733 anglers made in 1972. Although silver salmon indicates the highest return, that program, based upon a release of yearling fish, was experimental and was not continued.

Kokanee, the landlocked variety of sockeye salmon, have done very well in the lake insofar as numbers, but the size at maturity has been a problem. Adult size has declined to a point where many fishermen are not interested in making the special effort needed to fish for them. During the warmer summer months, trolling at depths of 50 to 100 feet with heavy weights, is required for fishing success and the smaller average fish size has discouraged the angler. The species being plankton feeders, are not available to the shore fisherman and must be sought in the open water of the lake. The best fishing occurs in spring and early summer when the Kokanee are near the surface. Every available tributary of the lake is utilized by this species for spawning with two distinct spawning periods. One race spawns in September, when they are particularly noticeable with their bright red color; and a second race spawns in

December, with a muddy brown color. After spawning, as with all salmon, the Kokanee die leaving carcasses which are heavily used by other wildlife, such as the bald eagles.

Management of rainbow trout is geared to release of catchable trout. An earlier program of releasing fingerlings was unsuccessful because the small trout apparently could not compete successfully for food with the high population of Kokanee. Releases are made into the tributary streams and at boat ramps and from there apparently migrate to the reservoir where shore feeding habits enable them to successfully co-exist with open-water feeding Kokanee.

Bass were introduced into the lake when old dredger ponds were inundated by the formation of the lake. Natural reproduction since that time has been sufficient to maintain an abundant population, although it is underutilized.

Other species of lesser importance in the reservoir are the brown bullhead, green sunfish, and the white catfish. The bullhead are numerous but are not sought by anglers, and the last two-named species occur in such low numbers as to be of little significance.

Lewiston Lake is a cold water fishery due to the direct deep water outflow from Clair Engle Lake. Water temperatures range from 40 to 67°F on a yearlong basis.

Approximately 20,000 catchable trout are released annually (75% rainbow) to sustain the fishery, and fishing success has remained fairly constant since 1964. The cold water is ideal habitat and mysis shrimp planted in Clair Engle Lake in 1968 have expanded into Lewiston to provide a key growth food.

Brown trout are numerous and furnish an opportunity for good trophy fishing. This population is maintained by natural reproduction with Mooney's Gulch being an important spawning area.

The bulk of the total fishery at Lewiston Lake is in the upper two-thirds of the lake for both cold and warm water species. The returns of catchable-sized Eastern Brook trout have been quite good to the creel, but stocking of this species is limited due to its availability.

This lake, remaining too cold during the summer for body contact recreation, and with the existing 10 mph speed limit appears to enhance the recreation fishing potential.

A steelhead and salmon hatchery was constructed in 1963 to mitigate the loss of spawning and nursery areas both within and above the Clair Engle and Lewiston Reservoirs. The Bureau of Reclamation provides an annual sum of $300,000 to the California Department of Fish and Game under whose auspices the hatchery is operated.

4. WATER

The magnitude of the Trinity-Lewiston Dam complex is much smaller than the Shasta Dam system, but it is a significant element in the total Central Valley Project and is the only project which involves inter-basin diversion of water. The annual inflow of 1.4 million acre-feet to Clair Engle Lake and Lewiston Reservoir is well regulated by the 2.5 million acre-foot impoundment. With the exception of the January 1974 flood, the Trinity River Project virtually eliminated flood threats to downstream development. Of greater significance, control of more than 25% of the total runoff of the Trinity River Basin has been accomplished since completion of Clair Engle Reservoir in 1960.

Although the Trinity Project was planned to divert 820,000 acre-feet of water annually into the Central Valley, the actual annual diversion since completion of the Clear Creek Tunnel in April 1963 has been 1.2 million acre-feet. This represents 89 percent of the Trinity River flow at Lewiston.

The annual yield of 34 inches of water in the Trinity Basin is predominately from spring snowmelt and major winter runoffs which approach flood stage every third or fourth year. Three major tributaries to Clair Engle lake -- the upper Trinity River, Coffee Creek, and the East Fork of the Trinity -- comprise half of the 692 square mile watershed. Smaller streams such as Stuart Fork and Swift Creek flow from the rugged Trinity Alps Mountains which border the western fringe of this drainage. Excellent summer flows are maintained by snowmelt from these streams, Coffee Creek, and the main Trinity River whose headwaters originate high in the mountains to the North and West.

The recreation industry, considered a secondary benefit of the completed Trinity River Project, has been enhanced by several obvious factors -- the most important being the strong regulative policy favoring maintenance of high water storage throughout the summer use period. Secondly, many problems encountered in older reservoirs were avoided through federal acquisition of shoreline areas. This has allowed more orderly development and use, encouraging both public and private recreational opportunities and development. Although remaining somewhat cool throughout summer, the water quality is classed as excellent. These three conditions have been important in promoting a high quality recreation experience for winter-contact sports, boating, land activities, and fishing.

The present water quality of the Trinity River at Lewiston is generally satisfactory for all uses. The reservoirs, free of major pollutants, are supported by a favorable inflow-storage relationship of 0.58 to 1 (the total annual inflow of the reservoir is 60% of the capacity of the reservoir). The quality of receiving waters from the essentially uninhabited mountainous reaches of this watershed is excellent. Except for sediment, little chemical, physical, or biological contaminants enter from these cold, clear streams.

The most important water quality problems that Clair Engle Lake and Lewiston Reservoir face are related to sediment, turbidity (fine soil particles suspended in water), and debris. Erosion problems occur each year, especially in the form of sheet and gully erosion, streambank cutting, and landslides. The magnitude of these problems is greatly increased during periods of major flooding which occurs every third or fourth year. Sedimentation is also considerably increased by upstream activities associated primarily with logging and roading in areas of high surface-erosion hazard. These high-erosion sites are normally within the reddish metamorphosed and granitic soils which border the western length of Clair Engle Lake.

Another direct and significant source of sediment is shoreline erosion created by wind and wave action during periods of high water. These are further aggravated by areas of geologic instability along larger tributaries.

Although actual sediment measurements have not been made, there is minor concern because of the limited "dead storage" area of 10,000 acre-feet. After filling this space, sediment then directly affects the available storage subject to regulation. Also, no reservoirs have been or are planned for construction above Clair Engle to entrap materials that would normally move downstream. A study by the River Basin Planning Staff in the early 1970's indicated that the current rate of sediment deposition is about 0.8 acre-feet/year/square mile (or 600 acre-feet of sediment being deposited each year from the 668 square mile drainage contributing to the Lake). At this rate, and considering heavier than normal inputs from several recent record floods, it can be assumed that the dead storage has been utilized and regulated storage is now being appreciably withdrawn from use annually. However, the reservoir is not expected to be operated below the minimum operation pool of 313,000 acre-feet (elevation 2,145). Therefore, that portion of the lake available for silt storage is proportionately much greater and should not become a major concern.

Since completion of the Trinity and Lewiston Dams, turbidity levels in the River at Lewiston have been acceptable except during flood periods. Within the reservoirs, turbidity is sometimes very high as a result of winter storm periods. Turbid waters prevailed in Lewiston Lake and downstream in the Trinity River for ten months following the December 1964 storms. Also, the January 1974 flood kept tremendous amounts of soil in suspension well into the summer. In addition to winter flood flows, shoreline or bank erosion by wave action from wind and boats aid in turbid water during heavy recreation use periods. The deep red soils around the Lake are continuously subjected to this shore wash and wake. Recreation use and aesthetics are unfavorably affected, fish life and productivity suffer, and water for industrial and domestic purposes requires costly filtration.

Woody debris, largely from natural sources and logging activity, has plagued public safety and usage of the Lake's surface. The annual cost of sweeping activities to remove the floating materials,

damaged hulls, and broken propellers are just a few indicators of this problem.

The promotion of recreation on these two reservoirs is predominately directed at a very high quality experience for water contact sports, shoreline users, boating, and fishing. However, with shoreline development and water-based recreation constantly increasing, slight degradation is expected to occur. Houseboat and other boater wastes, sewage disposal in areas of human concentration at the many resorts, subdivisions, summer homes, and campgrounds provides an active base of concern. But the anticipation that the water is becoming too poor to come into contact with or to drink following light treatment for bacteria is largely unfounded. Nevertheless, this fear exists and will probably persist. The dilution of localized contaminants by billions of gallons of water and direct exposure to nature's own purification system -- the sum -- substantially precludes any threats to public health. Possibly the only critical areas are those coves with poor water exchange, where pollutants are unable to dilute satisfactorily.

Comparable to bacterial contaminants are nutrient inputs from various land activities and sewage effluent from various disposal types. The level of nutrients in Clair Engle Lake is high enough to create an algae problem, but cold water and other factors seem to hold growth in abeyance. Resulting algae growth could affect nearly all uses, and notably drinking water, aesthetics, recreation, and fishing.

Although there have been no significant impacts to date, some threat from accidental highway chemical spills does exist. The potential of chemical pollution from other sources is fairly low within the watershed. Mineral and toxic material from mining activities, such as asbestos and arsenic, and detergents from domestic sources are comparatively minor. Bacteria and associated problems can be classed as moderate.

5. TIMBER

Of the total 38,000 acres of land in federal ownership in this Unit, almost 30,000 acres are covered by timber stands of commercial value. On an additional tract of 16,000 acres owned by the Southern Pacific Land Company, approximately 13,000 acres have commercial timber stands. Timber on the remaining 6,000 acres of private land in the Unit has already been heavily cut, and will probably yield little if any commercial timber harvest during the plan period.

Currently, all of the National Forest area is classified in the Special component in the Timber Management Plan, and, under the current Multiple Use Plan, timber harvesting is restricted to individual tree selection under an uneven-aged management system. Special emphasis has been placed on retention of scenic values in the Travel and Water Influence Zones. On this basis, the annual cut during the past nine years on National Forest land has averaged about 6 million board feet per year. The present inventory of

standing timber is estimated to be 310 million board feet. Growth rates vary from 67 to 336 board feet per acre per year, with the average growth estimated to be 220 board feet per year.

Upon completion of the Forest Land Management Plan, the area will probably be classified in the regulated timber component. Because of NRA legislation and regulations, timber management direction will remain essentially the same as established in 1976.

6. RANGE

There are no permits currently being issued for domestic livestock use in this Unit. The small amount of forage production which is available in a few scattered meadows could best be utilized by recreation livestock in the future if such a recreation use develops. In any event, consideration for the scenic resource would preclude development and use for domestic livestock.

7. WILDERNESS

No roadless areas were inventoried in this Unit by the Forest Service. Although there are some areas presently unroaded in this Unit, none of these is large or appears to have wilderness resource values.

8. MINERALS

Gold is the only mineral of consequence in this Unit. Historically, there were several mines in the area which produced substantial values of gold, but all of these have since ceased operation (some through inundation by the lake).

There are several mining claims which pre-date establishment of the NRA, and two patented claims. While it is not anticipated that these will yield more than minor mineral production, their operation could involve serious potential damage to aesthetic values in the NRA. Mineral studies have not been made in this planning unit.

9. VISUAL

At an elevation of 2,400 feet, Clair Engle Lake nestles in a horseshoe basin at the foot of the towering Trinity Alps. The reservoir is fed by numerous forks and tributaries of the popular Trinity River. The area is endowed with rugged mountain scenery and mostly covered by coniferous forests which grow to the shoreline.

These rich vegetation colors and textures, combined with the rugged background mountain forms and the deep blue color of the lake, provide the visitor with a high-quality visual experience.

Lewiston Reservoir, located just downstream from Clair Engle Lake, is much smaller in size. Its cold water fluctuates less than four feet yearly. Evidence of past placer mining is apparent at several locations near the Lake.

Intrusions such as resorts, old mining sites, and most of the roads, are generally compatible with the broad landscapes. The large barren borrow area west of the dam is an exception that does not blend into the natural landscape due to its extensive land disturbance.

The visual impact of the past timber harvesting has usually been acceptable in the long run. Its greatest impact is short term, before an area has a chance to heal over after cutting. Continual well planned timber harvesting will probably not detract from overall scenic variety.

C. SOCIO-ECONOMIC ENVIRONMENT

1. ARCHEOLOGICAL, PALEONTOLOGICAL AND HISTORICAL VALUES

A search of the scientific literature and field reconnaissance has revealed no items of paleontological interest in the Clair Engle-Lewiston Unit.

During the preliminary planning for the Clair Engle-Lewiston complex, Adam E. Treganza made an archaeological survey of the area to be inundated, including a buffer area -- substantially the area presently included within this NRA Unit. Of some 120 recorded sites, by far the greatest majority were inundated because of the predilection of the Trinity Wintu tribes for locations at the confluence of tributary streams. Hillside locations were usually avoided except for very small temporary camps. There are only about sixteen sites on public lands above the lake level and certainly some of these have been destroyed by past road and campground facility construction.

After two summers of study (UCAS Report 46, p. 28), Dr. Treganza came to the conclusion that there remained "practically no archaeological or ethnological data yet to be collected in the area, save that data pertaining to individual burials. These presumably are so dispersed throughout the land that their locations will probably never be known. Evidently all the sites worth excavation have been excavated and continued efforts in the region would almost undoubtedly result in an accumulation of quantitative data of little comparative value." This conclusion was confirmed by Dr. R. F. Heizer in the foreword to UCAS Report 43, pg. IV.

The unit is replete with historical material relating to the gold mining era beginning with the discovery of the precious metal in 1848. Since that time, Trinity County has produced about $200,000,000 in gold with most of the activity occurring between the time of discovery and the turn of the century. Many of the sites with colorful history, such as Trinity Center, Minersville, Sebastapol, Stringtown, Five Pines Mine, and Scott Ranch were inundated. However, many remain, including Fairview Mine, Bowerman Homestead, Ridgeville townsite and cemetery, Headlight Mine, several hydraulic mining areas in the Lewiston Lake Area, and Carrville.

Ranches who originally settled the valley now inundated by the reservoir have lent their names to the local scene, such as Eastman Gulch, Bragdon Gulch, Linton Ridge, and Feeney Gulch.

2. LAND STATUS AND USES

The total area of this Unit is 77,485 acres of which 16,400 acres are inundated by Clair Engle Lake, 750 acres of Lewiston Lake, leaving 60,335 acres of land surface area.

Of this land surface area 40,415 acres are National Forest lands administered by the Forest Service and 20,020 acres remain in private ownership.

Since the creation of the National Recreation Area a total of 3,168 acres has been acquired in this unit by purchase only using Land and Water Conservation funds.

The following table shows the extent of private land development.

Type Use	No. Acres Developed	Number of Homes Resorts, etc.
Residential	Scattered	22
Resorts Outside Commercial Zones	75	5

The extent of development of public land is summarized in the following table:

Type of Use	No. Acres Occupied	Number of Uses
1. Resorts, marinas and combinations including all commercial special use permits.	57	6
2. Roads, including Highway 3.		95 miles
3. Public campgrounds.		19 Total #
4. Public launch ramps.		638 Total Units
5. Other public use facilities		
Beach		4
Picnic Areas		2
Visitor Information Facilities		5
6. Bureau of Reclamation Operations.	250	
7. Other non-Recreation special use permits.	67	21 Permits

3. PUBLIC SERVICES AND UTILITIES IN THE UNIT

LAW ENFORCEMENT

Law enforcement on the Clair Engle-Lewiston Lakes Unit is performed by the Sheriff's Department of Trinity County, water and land operations are combined.

Annual costs of law enforcement are currently about $30,000, shared about equally by (State Department of Navigation and Ocean Development) and the Forest.

SOLID WASTE DISPOSAL

In contrast to the Shasta Unit, there are substantial problems on this Unit. The major concern here is the limited capacity of the County dump to cope with the relatively large volumes that arise on the Unit. The County seeks relief -- at least more sharing -- of the collection and disposal burden which the Unit generates.

TRANSPORTATION

In contrast with the Shasta Unit, this unit does have some challenges or concerns, if not problems, in regard to transportation to and through the Unit along State Highway routes. Two examples may be noted:

1) the traffic-limiting aspects of Highway 299W, both east and west of the Unit, but especially over Buckhorn Summit (between Redding and Weaverville).

2) the traffic-limiting aspects of Highway 3 over Scott Mountain as a northerly access to the Unit from Yreka and areas further north.

Both the Federal Highway Administration and the California Department of Transportation have indicated there are no proposed projects and the present level of funding precludes planning for changes in the character and capacities of the existing State Highways.

Trinity County has been able to meet the need for secondary road construction and improvement in the past, and will be expected to meet the needs for what will be essentially maintenance and improvement jobs. No significant additional road construction needs have been projected as a result of this planning effort.

D. ISSUES AND OPPORTUNITIES OF CRITICAL CONCERN

Some areas of Clair Engle Lake are becoming overcrowded with various boating and related activities. Powerboating conflicts with other lake recreation uses in specific areas. High-performance powerboats were creating noise levels which clash on the natural setting. Some of the large vessels used as houseboats are poorly constructed; some color selections on this type of boat are not compatible with the natural surroundings. Houseboats continually moor in selected locations along the shore and monopolize these areas to the exclusion of other uses.

Sub-standard sanitation facilities on some boats create spot-pollution problems.

There is some conflict between fishing and other uses of Clair Engle (primarily water skiing) in recognized productive fishing areas.

The number of sites suitable for development for swimming on the Clair Engle Lake is limited.

Navigational hazards, especially those created by varying the water surface level, are not adequately marked. Obstructions such as log booms are inadequately marked to be visible both day and night.

There are a few existing developments on private land which are not zoned for such uses. Potential residential or resort development on some parcels of private lands would destroy National Recreation Area scenic, watershed, archaeological or historical values.

Some camping facilities on public land do not meet the standards of development expected by the using public.

There are problems of pollution, solid waste disposal, and fire and resource damage attributable to dispersed camping on public lands along the lake shore. Dispersed camping in some locations is creating conflicts with other resources or other uses.

Development activities are reducing and affecting some wildlife habitat areas; habitat improvement measures are needed to sustain existing populations, but in most locations such activity could conflict with the visual resource. Developments and public use are definitely affecting and, in some cases, threatening the habitats of the southern bald eagle and the osprey. But there is a lack of specific knowledge of these species' habitat needs, and the impact of recreation use on them is not fully understood. There is insufficient awareness and sensitivity by people regarding the known needs of the southern bald eagle and the osprey.

Some additional trails are needed to meet public needs.

There is no clearcut policy to guide the nature and extent of private developments of public-use facilities on public land under special-use permits.

There are continuing differences of opinion as to the effect of various timber harvesting operations on the visual resources of the Unit.

There are several mining claims within the Unit whose extensive development could detract from scenic values of the area.

E. ASSUMPTIONS

Powerboating on Clair Engle Lake will increase until the use level becomes proportionately equal to use levels at other inland lakes of Northern California.

Houseboating will continue to be a popular recreation use of Clair Engle Lake because of the lake's conformation (a moderately long shoreline with some excellent coves and bays), and the confort and convenience of the modern houseboat which promote a wide array of lake surface and shoreline activities.

Fishing quality (measured by fishing success) will continue to deteriorate under increased fishing pressure which will be offset only partially by habitat improvement measures, a modified fish-planting program, or reduction of creel limits.

There is a continuing need for developed swimming sites at or near concentrations of users on Clair Engle Lake.

Non-power boating and swimming at other than developed sites will continue to be minor water-surface uses on Clair Engle Lake.

There will be a continuing demand for the use of private lands for residential development, resorts, and associated commercial facilities.

There will be an increasing demand for developed camping facilities on public land. Level 4 and 5 camping facilities on private land - including cabins, motels, and trailer parks - will play an increasing role in meeting public needs, both within the NRA and nearby.

The demand for dispersed camping, a popular recreation experience along the shoreline of Clair Engle Lake, will continue to increase.

The value of wildlife to the public will continue to increase, for both hunting and aesthetic appreciation.

There will be a continuing conflict between human use of this Unit and use by the southern bald eagle and osprey populations.

The timber resource will continue to be an important aspect of the Unit and the local economy.

Day use of the Unit, by local residents or transients who use overnite facilities outside the Unit, will probably never be a substantial part of the total recreation use of the Lake. However, there is a demand for day use facilities by local residences.

Increased demands for Trinity water -- by the Central Valley Project, or from recognized requests for additional downstream releases -- will probably require increased drawdown of the water level earlier in the season, and an increased total drawdown per season.

III. UNIT MANAGEMENT DIRECTION

Continue to limit boat size.

Manage for boating use to increase from 124 boats per day to an estimated 600 per day (in-season average). When use reaches planned capacities, initiate a procedure for control of the boating use.

Place an upper limit of 191 vessels designed for overnite occupancy. Of these, 80 will be allocated to commercial use, 74 to private use, and 37 to short term (30 days or less) use.

Recognize swimming at developed beach facililties on Clair Engle Lake as a needed, desirable activity for a total recreation experience, by construction of such facilities at concentrations of users.

In cooperation with the California Department of Fish and Game, strive to maintain a fishery consistent with a demand, recognizing that there are habitat limitations which cannot be overcome.

Recognize that non-powerboating will continue as a minor water surface use on both lakes, but make no specific allocation of water surface for this use.

Acquire those parcels of land which are specifically needed: (1) for public development, (2) to protect key visual resources values, (3) to protect key wildlife habitat and (4) to preserve and make available for public enjoyment the important cultural values.

Acquire scenic easements where portions of private land developments may intrude on travel zones.

Allocate no public land for recreation residence purposes.

Ensure that all paleontological, archaeological, and historical values are searched for and evaluated. Give full consideration to preserving, restoring and maintaining these values before proceeding with any resource use and/or development.

During planning and construction of all developments on public lands, meet the same standards as those prescribed for private-land zoning and development in the Secretary of Agriculture's regulations.

Restrict recreation road construction to that needed for access to planned developments or improvement of existing routes.

Ensure that the needs of the handicapped are met by (1) modifying existing facilities to meet the number of anticipated handicapped users, (2) giving full consideration to their needs in planning additional facilities.

As camping use of existing facilities increases to capacity, attempt to meet the average summer-weekend needs at a development scale of Level 4, for auto-access campgrounds and Level 2 or 3 for boat-access facilities.

The need to encourage distribution of use on a lake-wide basis will also be considered in locating new camping facilities and developing information stations.

Encourage private land development of all Level-5 facilities, including cabins and trailer parks.

Recommend to the County that no commercial centers be zoned in this Unit.

Sustain or increase existing wildlife populations. Maintain and restore self-sustaining populations of osprey and southern bald eagle over these species' former ranges. Avoid all activities or developments which would result in the destruction of the habitat of these species.

Harvest an average of 7 million board feet of timber annually. This volume will be periodically reviewed and may be adjusted by the Forest Land Management Plan.

Schedule reviews of this plan as six-year intervals following adoption of the final plan. Such reviews will cover all aspects of the plan to determine its viability under prevailing conditions, and will indicate any needs for revision. Public viewpoints will be solicited in various ways.

IV. IMPLEMENTATION PLAN

1. General Water Management and Zoning

Mark navigational hazards, those landform hazards which are a serious threat to the boating public. Information media will be used to advise the public of less serious hazards.

Construct at least 6 floating sanitation units as needed for the boating public.

Continue the inspection system for all boats equipped with sanitation devices.

Require that all vessels unoccupied for periods in excess of 24 hours be stored only at approved moorage sites.

Set a maximum length of 50' and a maximum width of 15' for any boat on either Clair Engle or Lewiston lakes except for special uses under permit. All new boats on Clair Engle Lake must be transportable over State Highways.

Prohibit residential occupancy on the lake surface for continuous and/or intermittent periods in excess of 30 days per season.

Enforce current State regulations on boat noise levels.

Continue the present 10 mph speed limit on Lewiston Lake as prescribed by the County ordinance.

Continue lake sweeping operations and, if feasible, capture debris at entry points to the lake.

2. Water Use Facilities

Permit expansion of commercial moorage to a total of 500 slips under development plans and schedules, to be completed with each marina, which reflect public needs.

Allow no additional private docks to be constructed under special-use permit on either Clair Engle or Lewiston Lakes, except as determined by the Forest Service to be an important adjunct to a commercial resort serving the general public.

3. Powerboating (including Water Skiing)

Allow speed powerboating (40 mph) lakewide on Clair Engle Lake to increase, with restrictions only as needed for:

(a) control of noise levels
(b) assurance of safety

4. Lake Surface Overnite Occupancy Control

Continue to provide for limited houseboating use on Clair Engle Lake.

Continue the permit system for all private houseboats which are berthed in approved moorage areas on Clair Engle lake. Enforce standards of sanitation and appearance for these vessels. The number of permits will be limited to 74. This decision to continue the use of private houseboats will be specifically reviewed at the regular public six-year plan reviews.

Permit expansion of the existing commercial houseboat fleet to 80 vessels, under existing or new special-use permits.

5. Fishing

Analyze and research fish habitat improvement measures in collaboration with the California Department of Fish and Game. Incorporate these measures into the fish habitat management program when they prove to be feasible and successful.

Make recommendations to the Department of Fish and Game for changes in fishing regulations when these will assist in sustaining the fishery.

6. Swimming

Maintain existing swimming beaches and consider construction of additional as cost-effective opportunities are identified.

7. General Land Management

The public lands in the Clair Engle-Lewiston Unit are divided into "management units" as follows:

1) Scenic - The area which includes the immediate foreground around the shoreline of the lake, the immediate foreground along all significant land travel routes, and all lands presently developed or planned for development for recreation purposes.

Management in this part of the Unit will be to preserve the scenic and aesthetic values by permitting only activities that meet the retention* standards for visual management.

2) Multiple Resource Management - This designation includes the greater part of the land acreage of the Unit where management of the wildlife, watershed, and timber resources will occur together with dispersed recreation use. Developments other than roads and trails are not contemplated in this area.

In this unit road construction activities within the middleground and background areas seen from Sensitivity Level I viewpoints will meet the visual resource quality objectives for partial retention.*

*See Volume II, Chapter I, National Forest Landscape Management, April 1974.

On the remaining areas road construction activities will meet the visual resource quality objectives for modification.*

8. Land Acquisition

Acquire the private lands shown in the Appendix for the indicated public purposes as they become available. Wherever possible, land exchange will be favored as a method of acquisition in lieu of direct purchase. This limitation on acquisition would be waived, and additional property would be acquired, should non-conforming uses deleterious to the goals and objectives of the National Recreation Area become imminent or actually occur.

Other land ownership adjustment within the NRA will be accomplished, wherever possible, using land exchange procedures.

Acquire scenic easements where portions of developments will detract from scenic values in travel zones.

Complete establishment of the scenic zone as defined in Section 2(a) of P.L. 89-336 along State Highway 3, including acquisition of land or scenic easements where necessary.

9. Private Land Development

In cooperation with Trinity County, permit private-land development and resource production that will maintain or enhance National Recreation Area values.

Participate with Trinity County in the formation of an architectural review board which will guide all future private land development in the Unit.

Consider recommending issuance of an exception to County zoning regulations for the Pine Cove Trailer Court.

Recognize the needs of public-use facilities which are located and developed on private land for lake access facilities in order for them to provide a complete recreation experience and be able to compete successfully. Consider granting such access where existing commercial marina facilities cannot adequately and reasonably provide these facilities.

Cooperate with the California Division of Forestry in administering private land timber harvest under the provisions of the Forest Practice Rules.

10. Public Recreation Facilities and Use

Encourage the Trinity County Planning Commission to participate in a review of Forest Service planning and development programs including both public and private investments.

*See Volume II, Chapter I, National Forest Landscape Management, April 1974.

Construct no additional facilities for day use except adequate boat launching and mooring facilities to meet planned boating use.

Provide group camping facilities at Stoney Group campground and one additional site on Trinity Lake.

Consider additional campground development in the Northern portion of Clair Engle Lake to provide better distribution of camper use on a Lake-wide basis when an analysis indicates the needs and development by the private sector is not expected to meet such needs.

Increase the availability of recreational vehicle dump stations.

Confine the location of permanent structures and sanitation facilities which might be damaged by flood inundation to the area lying above flood control pool elevation. (2387.0 feet)

District Ranger will examine the feasibility of allowing certain Forest Service facilities to be run by special use permittees.

Retain existing resorts and resort marinas and plan for one additional marina in the northeastern portion of Clair Engle Lake when use expands to the point that a development could become economically viable and is needed by the public.

Allow expansion of existing resorts, marinas or combinations of these public use facilities under the following guidelines:

a. Existing facilities or new facilities must be for the purpose of futhering the recreation potential of the lake and its environs within the limits of total use as projected by the entire plan.

b. All expansion must be integrated with and utilize the surrounding environment in its natural state to the greatest extent possible with minimal site modification.

c. The facilities proposed must be for the purpose of fulfilling a then-existing need by the public for utilizing the natural recreation resources of the area for short term recreation (periods of 30 days or less).

Effect controls of all dispersed camping to bring resource damage within acceptable limits through an education program and administrative regulation.

Allow dispersed auto access camping within ¼ mile of shoreline only where other adequate alternative facilities are not available under the above control system.

Continue dispersed boat access camping in this unit with appropriate controls.

Close areas to dispersed camping as necessary adjacent and contiguous to existing campgrounds, marinas, private land developments, or where such

use conflicts with wildlife or other resources. Establish camping stay limits as appropriate.

Controls will be implemented in two steps as necessary:

1. Begin with a strong education program to gain voluntary compliance with fire, sanitation, solid waste disposal, and site protection measures.

2. If the education program fails, institute a permit system with adequate patrol and law enforcement activities to gain compliance.

Determine the need for additional recreation trails and update existing trail plans.

11. Wildlife

In cooperation with the California Department of Fish and Game, develop wildlife plans which may include habitat-manipulation measures where scenic or other NRA resource values will not be impaired.

Identify the impacts of development projects on wildlife populations and minimize these effects by changes in design or appropriate mitigation efforts.

Continue research and studies of the osprey and southern bald eagle, with the objective of determining specific habitat requirements of the species, and the impacts of human use on each species.

Restrict human use and development in known areas of occupied habitat for the osprey and southern bald eagle and implement changes as new information indicates the need.

As necessary, map and sign the areas which are closed to protect the southern bald eagle and osprey populations. Manage such areas in accordance with habitat management considerations developed specifically for each species and/or territory.

Educate the public concerning the special habitat needs of the bald eagle and osprey populations by incorporating this information in all Forest Service information and education programs.

12. Archaeological, Historical, Paleontological

Take action needed to preserve, restore or maintain areas according to the values found prior to permitting any resource development or use to occur.

Incorporate these cultural features into visitor interpretative programs as a part of the total recreation experience of the user where such action will not endanger or destroy the features themselves.

Make the reconnaissance survey and evaluation process a part of the project planning process in any area where resource use and/or development is planned before the complete unit has been surveyed.

13. Off-Road Vehicle Use

Allow off-road vehicle use only in areas where such use will not create unacceptable soil vegetation or aesthetic damage and is in conformance with the Forest ORV Plan.

14. Timber Resource

Continue to harvest the timber resource of the unit, recognizing the special values of the National Recreation Area by varying the method of harvest.

Timber harvesting in the Scenic management unit will be limited to cutting methods that meet retention* standard for visual resource quality. Maintain a wide variety of species and size classes generally prevalent throughout the unit. Permanent roads for timber harvest will not be constructed. Complete slash cleanup will be required.

In the Multiple Resource Management Unit timber management activities within the middleground and background areas seen from Sensitivity Level I viewpoints will meet the visual resource quality objectives for partial retention.* On the remaining areas timber management activities will meet the visual resource quality objectives for modification.*

15. Other Resource Activity

Determine what mining claims still exist within the National Recreation Areas, program mineral examinations, and proceed with contest action where the claim is lacking in sufficient minerals to warrant development.

16. Visitor Information Activities

Develop information services at key NRA entry points and portals. Provide information to the forest user such as where to go, what to do, and what to see. Use information services to reduce use where excessive use is damaging the resource values.

Provide interpretative services to aid recreation visitors in identifying themselves with the historical and cultural past, as well as contemporary Forest Management programs.

*See Volume II, Chapter I, National Forest Landscape Management, April 1974.

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R-5
3/19/1948
62 Stat 33

[PUBLIC LAW 449—80TH CONGRESS]
[CHAPTER 139—2D SESSION]

[H. R. 3175]

AN ACT

To add certain public and other lands to the Shasta National Forest, California.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, subject to any valid claim or entry now existing and hereafter legally maintained, and for the purposes of protecting, improving, and utilizing their forests, watershed, recreational and other resources, all lands of the United States within the following-described areas are hereby added to and made parts of the Shasta National Forest and hereafter shall be subject to all laws and regulations applicable to the national forests: Section 31, township 36 north, range 3 west; sections 7 to 36, inclusive, township 36 north, range 4 west; sections 11 to 16, inclusive, 20 to 29, inclusive, 33 to 36, inclusive, township 36 north, range 5 west; sections 5 to 9, inclusive, 16 to 21, inclusive, 29 to 32, inclusive, township 35 north, range 3 west; all township 35 north, range 4 west; sections 1 to 4, inclusive, 9 to 17, inclusive, 20 to 29, inclusive, 31, 33 to 36, inclusive, township 35 north, range 5 west; sections 35, 36, township 35 north, range 6 west; sections 26 to 34, inclusive, township 34 north, range 2 west; sections 5 to 11, inclusive, 13 to 36, inclusive, township 34 north, range 3 west; all township 34 north, range 4 west; all township 34 north, range 5 west; sections 1, 2, 3, 10 to 14, inclusive, 23 to 26, inclusive, 35, 36, township 34 north, range 6 west; sections 4 to 7, inclusive, township 33 north, range 2 west; sections 1 to 17, inclusive, township 33 north, range 3 west; sections 1 to 12, inclusive, township 33 north, range 4 west; sections 1 to 18, inclusive, township 33 north, range 5 west; sections 1 to 4, inclusive, 9 to 14, inclusive, township 33 north, range 6 west; all Mount Diablo base and meridian: *Provided*, That lands within the flow lines of reservoirs operated or maintained as parts of the Central Valley reclamation project or otherwise occupied and used for the operation of said project shall continue to be administered by the Bureau of Reclamation of the Department of the Interior.

SEC. 2. The provisions of the Forest Exchange Act of March 20, 1922, as amended (42 Stat. 465; U. S. C., title 16, secs. 485, 486), are hereby made applicable to the areas described herein.

SEC. 3. This Act shall become effective July 1, 1948.

Approved March 19, 1948.

LANDS
FILE COPY

Copy sent State to BLM

Public Law 89-336
89th Congress, H. R. 797
November 8, 1965

An Act

79 STAT. 1295

To establish the Whiskeytown-Shasta-Trinity National Recreation Area in the State of California, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to provide, in a manner coordinated with the other purposes of the Central Valley project, for the public outdoor recreation use and enjoyment of the Whiskeytown, Shasta, Clair Engle, and Lewiston reservoirs and surrounding lands in the State of California by present and future generations and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters, there is hereby established, subject to valid existing rights, the Whiskeytown-Shasta-Trinity National Recreation Area in the State of California (hereinafter referred to as the "recreation area"). The boundaries of the recreation area, which consists of the Whiskeytown unit, the Shasta unit, and the Clair Engle-Lewiston unit, shall be those shown in drawing numbered BOR-WST 1004, dated July 1963, entitled "Proposed Whiskeytown-Shasta-Trinity National Recreation Area", which is on file and available for public inspection in the office of the Director of the Bureau of Outdoor Recreation, Department of the Interior. The Whiskeytown unit shall be administered by the Secretary of the Interior; and the Shasta and Clair Engle-Lewiston units shall be administered by the Secretary of Agriculture, except that lands or waters needed or used for the operation of the Central Valley project shall continue to be administered by the Secretary of the Interior to the extent he determines to be required for such operation. The two Secretaries shall coordinate their planning and administration of the respective units in such manner as to provide integrated management policies for the recreation area as a whole for the purposes of this Act in order to bring about uniformity to the fullest extent feasible in the administration and use of the recreation area.

Whiskeytown-Shasta-Trinity National Recreation Area, Calif. Establishment.

Administration.

Coordination.

ACQUISITION OF PROPERTY

SEC. 2. (a) Within the boundaries of the portion of the recreation area under his jurisdiction and outside such boundaries when required for the construction or improvement of access roads thereto, each Secretary is authorized to acquire lands, waters, or other property, or any interest therein, in such manner, including exchange as hereinafter provided, as he considers to be in the public interest to carry out the purposes of this Act. In connection with any such acquisition, each Secretary may permit the grantor a reservation of all or any part of the minerals or of any other interest or right of use in such lands or waters on such terms and conditions as the Secretary may deem appropriate. Any property or interest therein owned by the State of California or any political subdivision thereof within the recreation area may be acquired under the authority of this Act only with the concurrence of the owner. Notwithstanding any other provision of law, any Federal property located within the recreation area may, with the concurrence of the agency having custody thereof, be transferred without consideration to the administrative jurisdiction of the appropriate Secretary for use by him in carrying out the purposes of this Act.

The Secretary of the Interior, in order to assure public access to Clear Creek and to provide hiking and horseback riding trails for the public, may, as he deems necessary for these purposes acquire such easements or other interests on either or both sides of Clear Creek

between the south boundary of the Whiskeytown unit and the highway at Igo, California.

Scenic Easements

The Secretary of Agriculture is authorized to acquire scenic easements or such other interests, including ownership of the land therein, as he determines to be appropriate to protect and assure the appearance of a strip of land not to exceed six hundred and sixty feet on each side of the centerline of Federal Aid Secondary Highway Numbered 1089 between the points where said highway crosses the south line of sections 19 and 20, township 35 north, range 8 west, and where it crosses the south line of section 18, township 36 north, range 7 west, on the ~~northwesterly side~~ of the Clair Engle-Lewiston unit: *Provided*, That such easements or interests shall not be acquired without the consent of the owners so long as the appropriate local zoning agency shall have in force and applicable to such property a duly adopted, valid, zoning ordinance that, in the judgment of the Secretary of Agriculture, conforms to the zoning standards set forth in regulations issued pursuant to subsection (e).

Mutual consultation.

The two Secretaries shall engage in mutual consultation with respect to such acquisition and to exchange transactions so as to promote uniform policies therefor insofar as practicable, taking into consideration the purposes of the recreation area as a whole, the responsibility of the Secretary of the Interior for the administration of federally owned minerals and of the Central Valley project, and the responsibility of the Secretary of Agriculture for the administration of national forests.

Aquisition of non-Federal property.

(b) When the public interests will be benefited thereby, the Secretary of the Interior and the Secretary of Agriculture are each authorized to accept title to any non-Federal property within any part of the recreation area and in exchange therefor convey to the grantor of such property any federally owned property under his jurisdiction within the State of California which he classifies as suitable for exchange or other disposal, notwithstanding any other provision of law. The properties so exchanged shall be approximately equal in fair market value: *Provided*, That the Secretary of the Interior or the Secretary of Agriculture, as the case may be, may accept cash from or pay cash to the grantor in such exchange in order to equalize the value of the properties exchanged. The Secretary of Agriculture shall obtain the concurrence of the Secretary of the Interior with respect to the value of any mineral interests in any such exchange proposed to be made by the Secretary of Agriculture.

Noncommercial residency.

(c) Any owner or owners of improved residential property on the date of its acquisition by either Secretary may, as a condition to such acquisition, retain the right of use and occupancy of the property by himself and members of his immediate family for noncommercial residential purposes for a term ending at the death of such owner, the death of his spouse, or the day his last surviving child reaches the age of thirty, whichever is the latest. The value of the right retained shall be taken into consideration by the respective Secretary in determining the value of the property being acquired.

"Improved property."

(d) Privately owned "improved property" or interests therein shall not be acquired under this Act without the consent of the owner so long as an appropriate local zoning agency shall have in force and applicable to such property a duly adopted, valid, zoning ordinance that is approved by the Secretary having jurisdiction of the unit wherein the property is located. The term "improved property" as used in this Act shall mean any building or group of related buildings the actual construction of which was begun before February 7, 1963, together with not more than three acres of the land in the same ownership on which the building or group of buildings is situated: *Provided*,

That the respective Secretary may exclude from improved property any shore or waters, together with so much of the land adjoining such shore or waters as he deems necessary for public access thereto.

Joint issue of zoning regulations.

(e) Prior to the approval of any zoning ordinance for the purposes of this section, the Secretary of the Interior and the Secretary of Agriculture shall jointly issue regulations, which may be amended from time to time, specifying standards for such zoning ordinances. Standards specified in such regulations shall have the object of (1) prohibiting new commercial or industrial uses, other than commercial or industrial uses which the Secretaries consider to be consistent with the purposes of this Act; (2) promoting the protection and development of properties for purposes of this Act by means of use, acreage, frontage, setback, density, height, or other requirements; and (3) providing that the appropriate Secretary shall receive notice of any variance granted under, or any exception made to, the application of the zoning ordinance. Following issuance of such regulations, each Secretary shall approve any zoning ordinance or any amendment to an approved zoning ordinance submitted to him that conforms to the standards contained in the regulations in effect at the time of adoption of the ordinance or amendment. Such approval shall remain effective for so long as such ordinance or amendment remains in effect as approved.

(f) The suspension of the respective Secretary's authority to acquire any improved property without the owner's consent shall automatically cease if (1) such property is made the subject of a variance or exception to any applicable zoning ordinance that does not conform to any applicable standard contained in regulations issued pursuant to this section; or (2) if such property is put to any use which does not conform to any applicable zoning ordinance.

(g) Each Secretary shall furnish to any party in interest upon request a certificate indicating the property with respect to which the Secretary's authority to acquire without the owner's consent is suspended.

Property development certificate.

(h) Within the Shasta and Clair Engle-Lewiston units any owner of unimproved property who proposes to develop his property or a part thereof for service to the public may submit to the Secretary of Agriculture a development plan which shall set forth the manner in which and the time by which the property is to be developed and the use to which it is proposed to be put. If upon review of such plan the Secretary determines that the development and use of the property in the manner prescribed conforms to a zoning ordinance approved in accordance with the provisions of this section and that such use and development would serve the purposes of this Act, the Secretary of Agriculture may in his discretion issue to such owner a certificate to that effect. Upon the issuance of any such certificate and so long as such property is developed, maintained, and used in conformity therewith, the authority of the Secretary of Agriculture to acquire such property or any interest therein without the consent of the owner shall be suspended. This subsection shall not apply to any property which the Secretary of Agriculture determines to be needed for easements and rights-of-way for access, utilities, or facilities, or for administrative sites, campgrounds, or other areas needed for use by the United States for visitors to the national recreation area.

ESTABLISHMENT OF UNITS: BOUNDARY DESCRIPTIONS

Publication in Federal Register.

SEC. 3. (a) When the Secretary of Agriculture determines that sufficient lands, waters, or interest therein are owned or have been acquired by the United States within the boundaries of the Shasta unit or within the boundaries of the Clair Engle-Lewiston unit to

permit efficient initial development and administration for the purposes of this Act, he shall publish in the Federal Register a notice to that effect and a detailed description of the boundaries of such unit.

Publication in Federal Register.

(b) When the Secretary of the Interior determines that sufficient lands, waters, or interest therein are owned or have been acquired by the United States within the boundaries of the Whiskeytown unit to permit efficient initial development and administration for the purposes of this Act, he shall publish in the Federal Register a notice to that effect and a detailed description of the boundaries of the unit.

(c) Following the publication of any such notice, the respective Secretaries may continue to acquire the remaining property within the recreation area.

ADMINISTRATION: PRIORITIES

SEC. 4. (a) Each Secretary is authorized and directed to administer the portion of the recreation area under his jurisdiction in a manner coordinated with the other purposes of the Central Valley project and with the purposes of the recreation area as a whole and in such manner as in his judgment will best provide for (1) public outdoor recreation benefits; (2) conservation of scenic, scientific, historic, and other values contributing to public enjoyment; and (3) such management, utilization, and disposal of renewable natural resources as in the judgment of the respective Secretary will promote or is compatible with, and does not significantly impair, public recreation and conservation of scenic, scientific, historic, or other values contributing to public enjoyment. Such administration shall be carried out under land and water use management plans which each Secretary shall prepare and may from time to time revise in consultation with the other.

(b) In the administration of the portion of the recreation area under his jurisdiction—

(1) the Secretary of Agriculture shall utilize statutory authorities relating to the national forests in such manner as he deems appropriate to carry out the purposes of this Act; and

(2) the Secretary of the Interior may utilize such statutory authorities relating to areas of the national park system and such statutory authority otherwise available to him for the conservation and development of natural resources as he deems appropriate to carry out the purposes of this Act.

HUNTING AND FISHING

SEC. 5. Each Secretary shall permit hunting and fishing on lands and waters under his jurisdiction within the recreation area in accordance with the applicable laws of the State of California and of the United States: *Provided*, That each Secretary may designate zones where, and establish periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, or public use and enjoyment not compatible with hunting or fishing. Regulations prescribing any such restrictions shall be issued after consultation with the California Department of Fish and Game.

MINERAL DEVELOPMENT

SEC. 6. The lands within the recreation area, subject to valid existing rights, are hereby withdrawn from location, entry, and patent under the United States mining laws. The Secretary of the Interior, under such regulations as he deems appropriate, may permit the removal of the nonleasable minerals from lands or interests in lands

under his jurisdiction within the recreation area in the manner prescribed by section 10 of the Act of August 4, 1939, as amended (53 Stat. 1196; 43 U.S.C. 387), and from those under the jurisdiction of the Secretary of Agriculture within the recreation area in accordance with the provisions of section 3 of the Act of September 1, 1949 (63 Stat. 683; 30 U.S.C. 192c), and he may permit the removal of leasable minerals from lands or interests in lands within the recreation area in accordance with the Mineral Leasing Act of February 25, 1920, as amended (30 U.S.C. 181 et seq.), or the Acquired Lands Mineral Leasing Act of August 7, 1947 (30 U.S.C. 351 et seq.), if he finds that such disposition would not have significant adverse effects on the purposes of the Central Valley project or the administration of the recreation area: *Provided*, That any lease or permit respecting such minerals in lands administered by the Secretary of Agriculture shall be issued only with his consent and subject to such conditions as he may prescribe.

41 Stat. 437.
61 Stat. 913.

All receipts derived from permits and leases issued under the authority of this section on lands administered by the Secretary of Agriculture shall be paid into the same funds or accounts in the Treasury of the United States and shall be distributed in the same manner as provided for other receipts from the lands affected by the lease or permit, except that any receipts derived from permits or leases issued on those or other lands in the recreation area under the Mineral Leasing Act of February 25, 1920, as amended, or the Act of August 7, 1947, shall be disposed of as provided in the applicable Act; and receipts from the disposition of nonleasable minerals from public lands under the jurisdiction of the Secretary of the Interior shall be disposed of in the same manner as moneys received from the sale of public lands.

Disposal of receipts.

STATE JURISDICTION

SEC. 7. Nothing in this Act shall deprive any State or political subdivision thereof of its right to exercise civil and criminal jurisdiction within the recreation area or of its right to tax persons, corporations, franchises, or property, including mineral or other interests, in or on lands or waters within the recreation area.

ADDITIONS TO THE SHASTA AND TRINITY NATIONAL FORESTS

SEC. 8. The exterior boundaries of the Shasta National Forest in the State of California are hereby extended to include the lands described in the Act of March 19, 1948 (62 Stat. 83), and sections 22 and 27, township 35 north, range 1 west, Mount Diablo base and meridian. The exterior boundaries of the Trinity National Forest in the State of California are hereby extended to include all of sections 4, 5, and 8, the east half and the northwest quarter of section 6, the east half of section 7, the northwest quarter of section 17, and the northeast quarter of section 18, township 33 north, range 8 west, Mount Diablo base and meridian. Subject to any valid claim or entry now existing and hereafter legally maintained, all public lands of the United States and all lands of the United States heretofore or hereafter acquired or reserved for use in connection with the Shasta, Clair Engle, or Lewiston Reservoirs of the Central Valley project within the exterior boundaries of the Shasta and Trinity National Forests which have not heretofore been added to and made a part of such forests, and all lands of the United States acquired for the purposes of the recreation area in the Shasta or Clair Engle-Lewiston units are hereby added to and made a part of the respective national forests within which they are situated: *Provided*, That lands within the flow

lines of any reservoir operated and maintained by the Department of the Interior or otherwise needed or used for the operation of the Central Valley project shall continue to be administered by the Secretary of the Interior to the extent he determines to be required for such operation.

Disposal of revenues.

SEC. 9. Revenues and fees obtained by the United States from operation of the national recreation area shall be subject to the same statutory provisions concerning the disposition thereof as are similar revenues collected in areas of the national park system except that fees and revenues obtained from mineral development and from activities under other public land laws within the recreation area shall be disposed of in accordance with the provisions of the applicable laws.

Appropriation.

SEC. 10. There are hereby authorized to be appropriated for the acquisition of lands and interests in land pursuant to the provisions of this Act not more than $21,600,000. There are also authorized to be appropriated not more than $22,700,000 for the development of recreation facilities pursuant to the provisions of this Act.

Approved November 8, 1965.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 535 (Comm. on Interior & Insular Affairs).
SENATE REPORT No. 922 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 111 (1965):
July 12: Considered and passed House.
Oct. 21: Considered and passed Senate.

Title 36—PARKS, FORESTS, AND MEMORIALS

WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA

Pursuant to subsection 2(e) of the act of November 8, 1965 (79 Stat. 1295, 1297; 16 U.S.C. 460q–1(e)), providing for the establishment of the Whiskeytown-Shasta-Trinity National Recreation Area, Title 36, Code of Federal Regulations, is amended by the addition to Chapter I—National Park Service, Department of the Interior, of Part 30, and to Chapter II—Forest Service, Department of Agriculture, of §§ 251.40–251.42, as hereinafter set forth. The purpose of these amendments is to specify standards and criteria with which local zoning ordinances for the Whiskeytown, Shasta, and Clair Engle-Lewiston Units of the recreation area must comply in order to meet the approval of the Secretary of Agriculture and the Secretary of Interior, who have the responsibility for administering these units.

On May 6, 1967, a notice of proposed rule making was published in the FEDERAL REGISTER (32 F.R. 6979), by which the Department of Agriculture and the Department of the Interior afforded the public an opportunity to participate in the rule making process. The only comments or suggestions received were from the Shasta County Board of Supervisors, Shasta County, Calif., and the Palouse Property Co., San Francisco, Calif. Where appropriate, these comments, which were basically technical and clarifying in nature, were adopted, and the proposed regulations were revised accordingly.

It is important that these regulations be adopted as soon as possible so that the County of Shasta will have sufficient time within which to adopt implementing regulations before expiration of its present emergency interim zoning regulations for the Whiskeytown and Shasta Units of the recreation area. This involves time-consuming procedures such as publication of notices, conduct of hearings, preparation and review of planning reports, etc. Accordingly, the following regulations shall become effective upon the date they are published in the FEDERAL REGISTER.

DEPARTMENT OF AGRICULTURE,
JOHN A. BAKER,
Acting Secretary.

AUGUST 30, 1967.

DEPARTMENT OF THE INTERIOR,
STEWART L. UDALL,
Secretary.

SEPTEMBER 12, 1967.

13190

New
CFR 292

Chapter II—Forest Service, Department of Agriculture

PART 251—LAND USES

Sections 251.40, 251.41, and 251.42, reading as follows are added to Part 251 of Chapter II, Title 36 CFR:

WHISKEYTOWN - SHASTA - TRINITY NATIONAL RECREATION AREA; ZONING STANDARDS FOR SHASTA AND CLAIR ENGLE-LEWISTON UNITS

Sec.
251.40 Introduction.
251.41 General provisions; procedures.
251.42 Standards.

AUTHORITY: §§ 251.40–251.42 issued under sec. 2, 79 Stat. 1295; 16 U.S.C. 460q–1; 30 Stat. 35; 16 U.S.C. 551.

WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA; ZONING STANDARDS FOR SHASTA AND CLAIR ENGLE-LEWISTON UNITS

§ 251.40 Introduction.

(a) Administration of the Shasta and Clair Engle-Lewiston Units will be coordinated with the other purposes of the Central Valley Project of the Bureau of Reclamation and of the recreation area as a whole so as to provide for: (1) Public outdoor recreation benefits; (2) conservation of scenic, scientific, historic,

and other values contributing to public enjoyment; and (3) the management, utilization, and disposal of renewable natural resources which in the judgment of the Secretary of Agriculture will promote or is compatible with, and does not significantly impair, public recreation and conservation of scenic, scientific, historic, or other values contributing to public enjoyment.

(5) The Secretary may not acquire without consent of the owner any privately owned "improved property" or interests therein within the boundaries of these units, so long as the appropriate local zoning agency shall have in force and applicable to such property a duly adopted, valid, zoning ordinance that is approved by the Secretary. This suspension of the Secretary's authority to acquire "improved property" without the owner's consent would automatically cease: (1) If the property is made the subject of a variance or exception to any applicable zoning ordinance that does not conform to the applicable standards contained in §§ 251.40–251.42; or (2) if such property is put to any use which does not conform to any applicable zoning ordinance approved by the Secretary.

(c) "Improved property" as used in §§ 251.40–251.42, means any building or group of related buildings, the actual construction of which was begun before February 7, 1963, together with not more than three acres of land in the same ownership on which the building or group of buildings is situated, but the Secretary may exclude from such "improved property" any shore or waters, together with so much of the land adjoining such shore or waters, as he deems necessary for public access thereto.

(d) Sections 251.40–251.42 specify the standards with which local zoning ordinances for the Shasta and Clair Engle-Lewiston Units must conform if the "improved property" or unimproved property proposed for development as authorized by the Act with in the boundaries of the units is to be exempt from acquisition by condemnation. The objectives of §§ 251.40–251.42 are to: (1) Prohibit new commercial or industrial uses other than those which the Secretary considers to be consistent with the purposes of the act establishing the national recreation area; (2) promote the protection and development of properties in keeping with the purposes of that Act by means of use, acreage, setback, density, height or other requirements; and (3) provide that the Secretary receive notice of any variance granted under, or any exception made to, the application of the zoning ordinance aporoved by him.

(e) Following promulgation of §§ 251.40–251.42 in final form, the Secretary is required to approve any zoning ordinance or any amendment to an approved zoning ordinance submitted to him which conforms to the standards contained in the regulations in effect at the time of adoption of the ordinance or amendment.

(f) Any owner of unimproved property who proposes to develop his property for service to the public may submit to the Secretary a development plan setting forth the manner in which and the time by which the property is to be developed and the use to which it is proposed to be put. If the Secretary determines that the development and the use of the property conforms to approved zoning ordinances, and serves the purposes of the National Recreation Area and that the property is not needed for easements and rights-of-way for access, utilities, or facilities, or for administration sites, campgrounds, or other areas needed for use by the United States for visitors, he may in his discretion issue to such owner a certification that so long as the property is developed, maintained, and used in conformity with approved zoning ordinances the Secretary's authority to acquire the property without the owner's consent is suspended.

§ 251.41 General provisions; procedures.

(a) *Approval of zoning ordinances and development plans.* (1) All validly adopted zoning ordinances and amendments thereto pertaining to the Shasta and Clair Engle-Lewiston Units may be submitted by the county of origin to the Secretary for written approval relative to their conformance with the applicable standards of §§ 251.40–251.42. Within 60 days following submission, the county will be notified of the Secretary's approval or disapproval of the zoning ordinances or amendments thereto. If more than 60 days are required, the county will be notified of the expected delay and of the additional time deemed necessary to reach a decision. The Secretary's approval shall remain effective so long as the zoning ordinances or amendments thereto remain in effect as approved.

(2) Development plans pertaining to unimproved property within the Shasta and Clair Engle-Lewiston Units may be submitted by the owner to the Secretary for determination as to whether they conform with approved zoning ordinances and whether the planned use and development would serve the Act. Within 30 days following submission of such plans the Secretary will approve or disapprove the plans or, if more than 30 days are required, will notify the applicant of the expected delay and of the additional time deemed necessary.

(b) *Amendment of ordinances.* Amendments of approved ordinances may be furnished in advance of their adoption to the Secretary for written decision as to their conformance with applicable standards of §§ 251.40–251.42.

(c) *Variances or exceptions to application of ordinances.* (1) The Secretary shall be given written notice of any variance granted under, or any exception made to, the application of a zoning ordinance or amendment thereto approved by him.

(2) The County, or private owners of improved property, may submit to the Secretary proposed variances or exceptions to the application of an approved zoning ordinance or amendment thereto for written advice as to whether the intended use will make the property subject to acquisition without the owner's consent. Within 30 days following his receipt of such a request, the Secretary will advise the interested party or parties as to his determination. If more than 30 days are required by the Secretary for such determination, he shall so noti the interested party or parties stating t additional time required and the reasons therefore.

(d) *Certification of property.* Where improvements and land use of improved property conform with approved ordinances, or with approved variances from such ordinances, certification that the Secretary's authority to acquire the property without the owner's consent is suspended may be obtained by any party in interest upon request to the Secretary. Where the development and use of unimproved property for service to the public is approved by the Secretary, certification that the authority to acquire the property without the owner's consent is suspended may be issued to the owner.

(e) *Effect of noncompliance.* Suspension of the Secretary's authority to acquire any improved property without the owner's consent will automatically cease if (1) such property is made the subject of variance or exception to any applicable zoning ordinance that does not conform to the applicable standard in the Secretary's regulation, (2) such property is put to a use which does not conform to any applicable zoning ordinance, or, as to property approved by the Secretary for development, a use which does not conform to the approved development plan or (3) the local zoning agency does not have in force a duly adopted, valid zoning ordinance that is approved by t Secretary in accordance with the standards of §§ 251.40–251.42.

(f) *Nonconforming commercial or industrial uses.* Any existing commercial or industrial uses not in conformance with approved zoning ordinances shall be discontinued within 10 years from the date such ordinances are approved: *Provided, however,* That with the approval of the Secretary such 10-year period may be extended by the county for a prescribed period sufficient to allow the owner reasonable additional time to amortize investments made in the property before November 8, 1965.

§ 251.42 Standards.

(a) The standards set forth in §§ 251.40–251.42 shall apply to the Shasta and Clair Engle-Lewiston Units, which are defined by the boundary descriptions in the notice of the Secretary of Agriculture of July 12, 1966 (31 F.R. 9469), and to a strip of land outside the National Recreation Area on either side of Federal Aid Secondary Highway Numbered 1089, as more fully described in 2(a) of the act establishing the recreation area (79 Stat. 1296).

(b) New industrial or commercial uses: new industrial or commercial uses will be prohibited in any location except under the following conditions:

(1) The industrial use is such that its operation, physical structures, or wa byproducts would not have significa adverse impacts on surrounding or near by outdoor recreation, scenic and esthetic values. Industrial uses having an adverse impact include, but are not limited

to, cement production, gravel extraction operations involving more than one-fourth acre of surface, smelters, sand, gravel and aggregate processing plants, fabricating plants, pulpmills, and commercial livestock feeder yards.

(2) (i) The commercial use is for purposes of providing food, lodging, automotive or marine maintenance facilities and services to accommodate recreationists and the intended land occupancy and physical structures are such that they can be harmonized with adjacent land development and surrounding appearances in accordance with approved plans and schedules.

(ii) This standard provides for privately owned and operated businesses whose purposes and physical structures are in keeping with objectives for use and maintenance of the area's outdoor recreation resources. It precludes establishment of drive-in theaters, zoos, and similar nonconforming types of commercial entertainment.

(c) Protection of roadsides: Provisions to protect natural scenic qualities and maintain screening along public travel routes will include:

(1) Prohibition of new structural improvements or visible utility lines within a strip of land extending back not less than 150 feet from both sides of the centerline of any public road or roadway except roads within subdivisions or commercial areas. In addition to buildings, this prohibition pertains to above-ground power and telephone lines, borrow pits, gravel, or earth extraction areas, and quarries.

(2) Retention of trees and shrubs in the above-prescribed roadside strips to the full extent that is compatible with needs for public safety and road maintenance. Wholesale clearing by chemical or other means for fire control and other purposes will not be practiced under this standard.

(d) Protection of shorelines: Provisions to protect scenic qualities and reduce potentials for pollution of public reservoirs will include: Prohibition of structures within 300 feet horizontal distance from highwater lines of reservoirs other than structures the purpose of which is to service and accommodate boating or to facilitate picnicking and swimming: *Provided*, That exceptions to this standard may be made upon showing satisfactory to the Secretary that proposed structures will not conflict with scenic and antipollution considerations.

(e) Property development: Location and development of structures will conform with the following minimum standards:

(1) *Commercial development.* (i) Stores, restaurants, garages, service stations, and comparable business enterprises will be situated in centers zoned for this purpose unless they are operated as part of a resort or hotel. Commercial centers will be of sufficient size that expansion of facilities or service areas is not dependent upon use of public land.

(ii) Sites outside designated commercial centers will be used for resort development contingent upon case by case concurrence of the responsible county officials and the Secretary that such use is, in all aspects, compatible with the purposes for establishing the recreation area.

(iii) Structures for commercial purposes, inclusive of isolated resorts or motels, will not exceed two stories height at front elevation, and will be conventional architecture and will utilize colors, nonglare roofing materials, and spacing or layout that harmonizes with forested settings. Except for signs, structures designed primarily for purposes of calling attention to products or service will not be permitted.

(2) *Residential development.* (i) Locations approved for residential development will be buffered by distance, topography, or forest cover from existing or planned public use areas such as trailer parks, campgrounds, or organization sites. Separation will be sufficient to avoid conflicts resulting from intervisibility, noise, and proximity that is conducive to private property trespass.

(ii) Requirements for approval of residential areas will include: (a) Construction of access when main access would otherwise be limited to a road constructed by the United States primarily to service publicly owned recreation developments; (b) limitation of residences to single-family units situated at a density not exceeding two per acre, but any lot of less than a half-acre may be used for residential purposes if, on or before promulgation of §§ 251.40–251.42, such lot was in separate ownership or was delineated in a county-approved plat that constitutes part of a duly recorded subdivision; (c) use of set-backs, limitations to natural terrain, neutral exterior colors, nonglare roofing materials, and limitations of building heights fully adequate to harmonize housing development with the objective of the National Recreation Area as set forth in the act.

(3) *Signs and signing.* Only those signs may be permitted which (i) do not exceed 1 square foot in area for any residential use; (ii) do not exceed 40 square feet in area, 8 feet in length, and 15 feet maximum height from ground for any other use, including advertisement of the sale or rental of property; and (iii) which are not illuminated by any neon or flashing device. Commercial signs may be placed only on the property on which the advertised use occurs, or on the property which is advertised for sale or rental. Signs shall be subdued in appearance, harmonizing in design and color with the surroundings and shall not be attached to any tree or shrub. Nonconforming signs may continue for a period not to exceed 2 years from the date a zoning ordinance containing these limitations is adopted.

[F.R. Doc. 67-10907; Filed, Sept. 15, 1967; 8:47 a.m.]

Zoning Ordinances

APPENDIX B

Essential elements of Shasta County zoning ordinance for the Shasta Unit of the National Recreation Area. (For further details the reader is referred to the Shasta County Planning Commission and the Shasta County General Plan references to the Conservation Recreation Classification.

SECTION 4333 WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA, SHASTA UNIT, OR "NRA-S" DISTRICT

A. Intent: The intent of the following regulations is to establish development standards in the Shasta Lake National Recreation Area which will (1) be compatible with public recreation and enjoyment and the conservation of natural resources and scientific, historic and other values, (2) provide immunity from acquisition by the Department of Agriculture of all "improved property" as defined by Title 36, Code of Federal Regulations, Chapter II, Section 251.40; and (3) allow property owners within the Recreation Area to take advantage of the certification procedures established by Sections 251.40 and 241.41 of the above Code whereby immunity from acquisition by the Department of Agriculture may be secured if existing improvements or proposed future developments comply with the intent and provisions of this Division.

B. Application: This district may be combined with other districts provided for in this Chapter. Where, as a result of such combination, a conflict in restrictions exists, it is intended that the more stringent restrictions shall control except when this district is combined with a "C-1" district, a hotel, motel or resort may be permitted by use permit in the combined district. (Amended by Ord. 494-18, effective July 18, 1973.)

C. This district is created solely for use within the Shasta Unit of the Whiskeytown-Shasta-Trinity National Recreation Area.

D. General Provisions:

1. Industrial or commercial uses which have an adverse impact on the surrounding or nearby outdoor recreation, scenic and aesthetic values are prohibited. Such uses include, but are not limited to, cement production, gravel extraction operations, involving more than one-fourth acre of surface, smelters, sand, gravel and aggregate processing plants, fabricating plants, pulp mills and commercial livestock feeder yards. Provided, however, development of mining claims and mineral interest shall be allowed within areas zoned for industrial use ("M" zones) or mining use ("M-M" zones) upon an appropriate use permit issued subject to all the conditions specified in Section 4342 and Section 4348, and subject to such further conditions as shall lessen the adverse effects of the mining operations on the recreational and aesthetic values of the area.

   Any existing commercial or industrial use not in conformance with this section shall be discontinued within ten (10) years from the date this section is adopted by the Board of Supervisors, provided, however, that with the approval of the Secretary of Agriculture such ten (10) year period may be extended by the Board of Supervisors for a prescribed period sufficient to allow the owner reasonable additional time to amortize investments made in the property before November 8, 1965.

SECTION 4333 WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA, SHASTA UNIT, OR "NRA-S" DISTRICT (continued)

2. Protection of roadsides. New structural improvements, mobilehomes, or visible utility lines within a strip of land extending back not less than 150 feet from both sides of the centerline of any public road or roadway, except roads within a subdivision or in areas zoned for commercial or residential use, are prohibited. In addition to buildings and other structures, this prohibition pertains to aboveground power and telephone lines, borrow pits, gravel or earth extraction areas, and quarries. Trees and shrubs within the above described strip shall be retained to the fullest extent that is compatible with needs for public safety and road maintenance. Wholesale cleaning for fire control and other purposes is prohibited.

3. Protection of shorelines. Structures within 300 feet horizontal distance from the highwater line of Shasta Lake are prohibited, except for the following:

(i) Structures the purpose of which is to service and accommodate boating or to facilitate picnicking and swimming.

(ii) Structures and mobilehomes in an approved subdivision.

(iii) A structure or mobilehome the location of which has been approved by the Secretary of Agriculture upon a satisfactory showing by the applicant that the structure will not conflict with scenic and anti-pollution considerations.

4. Signs. Only those signs may be permitted which:

(i) Do not exceed one square foot in area for any residential use;

(ii) Do not exceed 40 square feet in area, 8 feet in length, and 15 feet maximum height from ground, for any other use, including advertisement of the sale or rental of property; and

(iii) Which are not illuminated by any neon or flashing device.

Commercial signs may be placed only on the property on which the advertised use occurs, or on the property which is advertised for sale or rental. Signs shall be subdued in appearance, harmonizing in design and color with surroundings and shall not be attached to any tree or shrub. Non-conforming signs may continue for a period not to exceed two (2) years from the date a zoning ordinance containing these limitations is adopted.

5. Protection of existing access rights into adjoining lands. These regulations shall not affect or vary existing access rights into lands adjoining the Shasta Unit of the Whiskeytown-Shasta-Trinity National Recreation Area.

SECTION 4333 WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA, SHASTA UNIT, OR "NRA-S" DISTRICT (continued)

E. Residential Development:

1. Single family dwellings only are permitted, provided, however, that a mobilehome shall be allowed only in a combined "T" Trailer or "L" Recreational District.

2. Minimum building site is one-half acre except that lots of less than one-half acre which were divided for residential purposes on or before September 16, 1967, and were in separate ownership or were delineated in a county approved plat that constitutes part of a duly recorded subdivision, may be used for residential purposes.

3. a. Minimum front yard required: Twenty (20) feet.

b. Minimum side yard required: Five (5) feet.

c. Minimum rear yard required: Ten (10) feet.

d. Maximum building height limit:
Main buildings: Thirty-five (35) feet.
Accessory buildings: Fifteen (15) feet.

e. Parking required: Not less than one (1) parking space for each dwelling unit.

f. Exterior colors: The use of neutral exterior colors is required.

g. Roofing materials: The use of non-glare roofing materials is required.

h. Will be buffered by distance, topography, or forest cover from existing or planned public use areas such as trailer parks, campgrounds, or organizational sites. Separation will be sufficient to avoid conflicts resulting from intervisibility, noise, and proximity that is conductive to private property trespass.

* 4. In other than an approved subdivision, the clearing required for structures or mobilehomes and the access thereto shall be reviewed by the District Ranger, Shasta Lake District, Shasta-Trinity National Forest. In any case where the District Ranger does not approve of the amount and location of clearing intended and he communicates this fact to the County Planning Department, a use permit shall be required. In granting the use permit, consideration shall be given to the proposed location on the parcel of the structure or mobilehome and the access road thereto which preserves the natural forest setting of the parcel to the greatest extent.

(45)

APPENDIX B

SECTION 4333 WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA, SHASTA UNIT, OR "NRA-S" DISTRICT (continued)

F. Commercial Development:

1. A use permit must be secured in each case.

2. Commercial development shall be limited to that providing a public service including food, lodging, automotive or marine maintenance facilities and services and other comparable business enterprises.

3. Commercial enterprises shall be situated in combined "C-1" zones unless they are operated as part of a resort or hotel.

4. Maximum building height: Thirty-five (35) feet.

5. In granting a use permit, considerations will be given to the use of neutral colors, non-glare roofing materials, and architecture and layout that harmonizes with forested settings.

G. Variances from the provisions of this section may be granted in accordance with Section 4380, subject, however, to the following conditions and restrictions:

1. If property is made the subject of a variance which results in such property not conforming to any applicable standards contained in the provisions of this section, the authority of the Secretary of Agriculture to acquire "improved property" or property for which a certificate of immunity was granted, may be reinstated as to such property.

2. The Planning Commission or owners of property may consult the Secretary of Agriculture as to whether the granting of any proposed variance or exception would terminate the suspension of his authority to acquire the affected property without the consent of the owner and may request the approval of a variance or exception by the Secretary of Agriculture, provided, the Secretary is notified in writing at least thirty (30) days in advance of the hearing on the application for the variance or exception. The Secretary within 30 days after the receipt of a request for approval of a variance or exception, shall advise the owner or Planning Commission whether or not the intended use will subject the property to acquisition by condemnation. If more than 30 days are required by the Secretary for such determination, he shall so notify the Planning Commission or private owner, stating the additional time required and the reasons therefor.

(46)

SECTION 4348. MINING OR "M-M" DISTRICTS.

A. Intent. This district classification is intended to be applied to areas which are mineral in character and where there is probability of mining as a major use, and forestry, grazing and recreation are desirable uses when compatible. Provided, however, that where this district is combined with a Whiskeytown-Shasta-Trinity National Recreation Area, Shasta Unit, or "NRA-S" District, the "NRA-S" District regulations shall be the controlling regulations. The following regulations shall apply in all Mining or "M-M" Districts.

B. Uses Permitted:

1. All exploration work for minerals.

2. All physical mining operations either underground or open pit, including any and all facilities, works, buildings or structures related to or used in connection with such mining operations or transporting mined materials.

3. Construction and operation of mills or other facilities, works, buildings or structures related to or used in connection with the storing, transportation or physical processing, heating or refining of mined materials or products derived therefrom.

4. Management of land and forest for the production and harvest resources, including tree farming, logging, Christmas tree production and harvesting and related facilities.

2. [illegible] of applications as to whether the granting of any proposed variation

5. Housing for use by owners or their employees who are engaged in the uses permitted.

6. Non-commercial recreational uses including one single family dwelling or mobilehome per parcel.

7. Game preserves or hunting clubs including the sale of hunting or fishing privileges except for such commercial enterprises catering to public use.

8. Public buildings including schools, fire stations, libraries, hospitals, parks, historic monuments, playgrounds and similar uses.

9. Public utility facilities.

10. Signs for sale or lease of property. Signs appurtenant to any permitted use shall be permitted for each establishment according to the following formula:

(75)

APPENDIX B

SECTION 4348. MINING OR "M-M" DISTRICTS. (continued)

a. Signs for each establishment may be divided into not more than six (6) single or double faced signs.

b. Signs not exceeding fifteen (15) square feet in area for each building site may be displayed for purpose of advertising the sale or lease of property upon which displayed.

11. General agriculture, orchards and crop farming.

C. Uses Permitted Subject to First Securing a Use Permit:

1. Any smelting or milling facility which might be objectionable by reason of production or emission of noise, offensive odor, smoke, dust, bright light or vibration.

2. Placer mining.

3. Lumber mills or other commercial wood processing plants.

4. Commercial recreational enterprises or resorts catering to the public use.

5. Residential structures including mobilehomes when not related to mining or other permitted industrial use and when there is more than one residence on each parcel or lot.

6. Public and commercial refuse disposal sites.

7. Screened junk yards.

8. Mobilehome or trailer parks.

9. Commercial uses such as service stations, restaurants, stores, service establishments, resorts and similar land uses where such uses are not detrimental to the primary activity in the area.

10. Airports or heliports.

D. Maximum Building Heights: None.

E. Building Site Required: Five (5) acres or as specified in an approved use permit.

F. Minimum Yards Required: None, except front setbacks as may be required under Section 4370 of this Division, entitled "Building Lines".

APPENDIX B

Essential elements of the Trinity County Zoning Ordinance for the Clair Engle-Lewiston Unit of the National Recreation Area. (For further details the reader is referred to the Trinity County Planning Commission and the Trinity County General Plan.)

SECTION 26 RECREATION DEVELOPMENT DISTRICTS OR R-D-1 DISTRICTS

Subject to the provisions of Section 30, none but the following uses, or uses which in the opinion of the Planning Commission are similar will be allowed. See Section 30a.

Purpose

The purpose of the following regulations is to establish development standards and to allow uses in the Trinity Unit of the Whiskeytown-Shasta-Trinity National Recreation Area which will (1) be compatible with public and private recreation and enjoyment and the conservation of natural resource and scientific, historic, scenic and other values; (2) provide immunity from acquisition by the Department of Agriculture of all "improved property" as defined by Title 36, Code of Federal Regulations, Chapter II, Part 251; and (3) allow property owners within the recreation area to take advantage of the certification procedures established by Section 251.40, 251.41, and 251.42 of the above code.

A. Uses permitted.

Single family dwellings subject to complying with other requirements of this ordinance.

Accessory buildings and uses such as garages, carports, woodsheds, boat houses and buildings of a similar nature but not including tent or trailer or rooming and boarding of not over two (2) persons and subject to the provisions of this ordinance. Utilities as necessary to make possible the exercise of any use otherwise permitted.

Timber management and tree harvesting by individual selection and the utilization of other renewable resources.

B. Uses permitted subject to first securing a use permit in each case.

1. Motels, hotels, resorts, mobile home courts, campgrounds, to accomodate recreationists.

2. Commercial uses when basic zoning is 'C' District, but limited to food stores, restaurants, service stations, automotive or marine maintenance facilities or service and other comparable business. Service uses and similar commercial uses provided that they are part of a resort or motel.

3. Industrial uses when basic zoning is 'M' Districts and when there is no waste by-products that has any adverse effect on surrounding property or esthetic values. Industrial uses which have an adverse impact include, but are not limited to, cement production gravel extraction operations involving more than one-fourth acre of surface, smelters, sand, gravel, and aggregate processing plants, fabricating plants, pulp mills, and commercial livestock feeder yards. Provided however, development of valid, existing mining claims and mineral interests shall be allowed, subject to conditions necessary to lessen the adverse effects of the mining operations on recreation and esthetic values of the area.

4. Public utility uses and structures not covered above.

5. Signs:

   a. Maximum size one (1) square foot for residential uses.

   b. Maximum size forty (40) square feet in area, eight (8) feet in length and fifteen (15) feet maximum height from ground for any other use, including advertisement of the sale or rental of property; signs not to be illuminated by any neon or flashing device. Commercial signs to be placed only on property on which is advertised for sale or rental. Signs to be subdued in appearance, harmonizing in design and color with the surroundings and shall not be attached to any tree or shrub.

6. Recreation livestock use and grazing.

E. Minimum building site required on all lots. Residential one-half acre; Commercial one acre; Industrial three acres.

G. Minimum lot width required. Corner and interior 150 feet average lot width.

I. Lot Coverage. No requirement.

J. Maximum allowable height. Two (2) stories but not to exceed forty (40) feet.

K. Minimum front yard required. One-hundred fifty (150) feet from the center line of any public road including overhead public utility lines, except within a subdivision or commercial area, then twenty (20) feet.

L. Minimum side yards required. Ten (10) feet.

N. Minimum reat yards required. Twenty (20) feet.

Q. General requirements. No structures, including utility lines shall be located closer than 300 feet from high water line of any reservoir other than structures to service boating or swimming, provided that for allowable commercial uses the front setback shall be a minimum of fifty (50) feet from the center line of any public road.

1. In addition to any other requirements set out in Section 30, the Planning Commission shall require the following:

   a. Posting of adequate security to insure compliance with conditions of approval.

   b. Landscaping, screening from roads.

   c. Architectural and landscaping approval.

   d. Approval of building materials.

   e. Approval of site plans, color of exterior (all colors to be neutral, all roofing non-glare).

   f. Restriction on earth work, or disturbance of streams, vegetation, trees, or other natural material, removal or disposal of slash.

   g. Any other condition necessary to protect the beauty of the area.

   h. Location of single family development to be buffered by distance, topography or forest cover from existing or planned public use areas.

2. Non-conforming uses, structures, signs and lots:

   a. Non-conforming signs may be maintained for two (2) years after the effective date of this ordinance.

   b. Non-conforming commercial or industrial uses must be discontinued within ten (10) years after effective date of this ordinance, which period may be extended by the Board of Supervisors for a period sufficient to allow the owner to amortize any investment made prior to November 8, 1965.

   c. Non-conforming structures: any structure that is non-conforming due to height, location, coverage and setbacks must be discontinued within ten (10) years after effective date of this ordinance, which period may be extended by the Board of Supervisors for a period sufficient to allow the owner to amortize any investment made prior to November 8, 1965.

   d. Any building site of less than the required area that was in single ownership on or before September 16, 1967, may be used as a building site.

3. Variances and Amendments:

   a. Variances may be granted subject to the provisions of Section 31 and subject to: (1) submission to, and approval of the Secretary of Agriculture to assure that any variance granted conforms to the applicable standards Part 251.42.

b. Any amendment to the ordinance or rezoning shall be submitted to and approved by the Secretary of Agriculture to assure that such amendment conforms to the applicable standards Part 251.42.

4. Where District regulations result in conflict the most stringent regulations shall apply.

WHISKEYTOWN-SHASTA-TRINITY NATIONAL RECREATION AREA

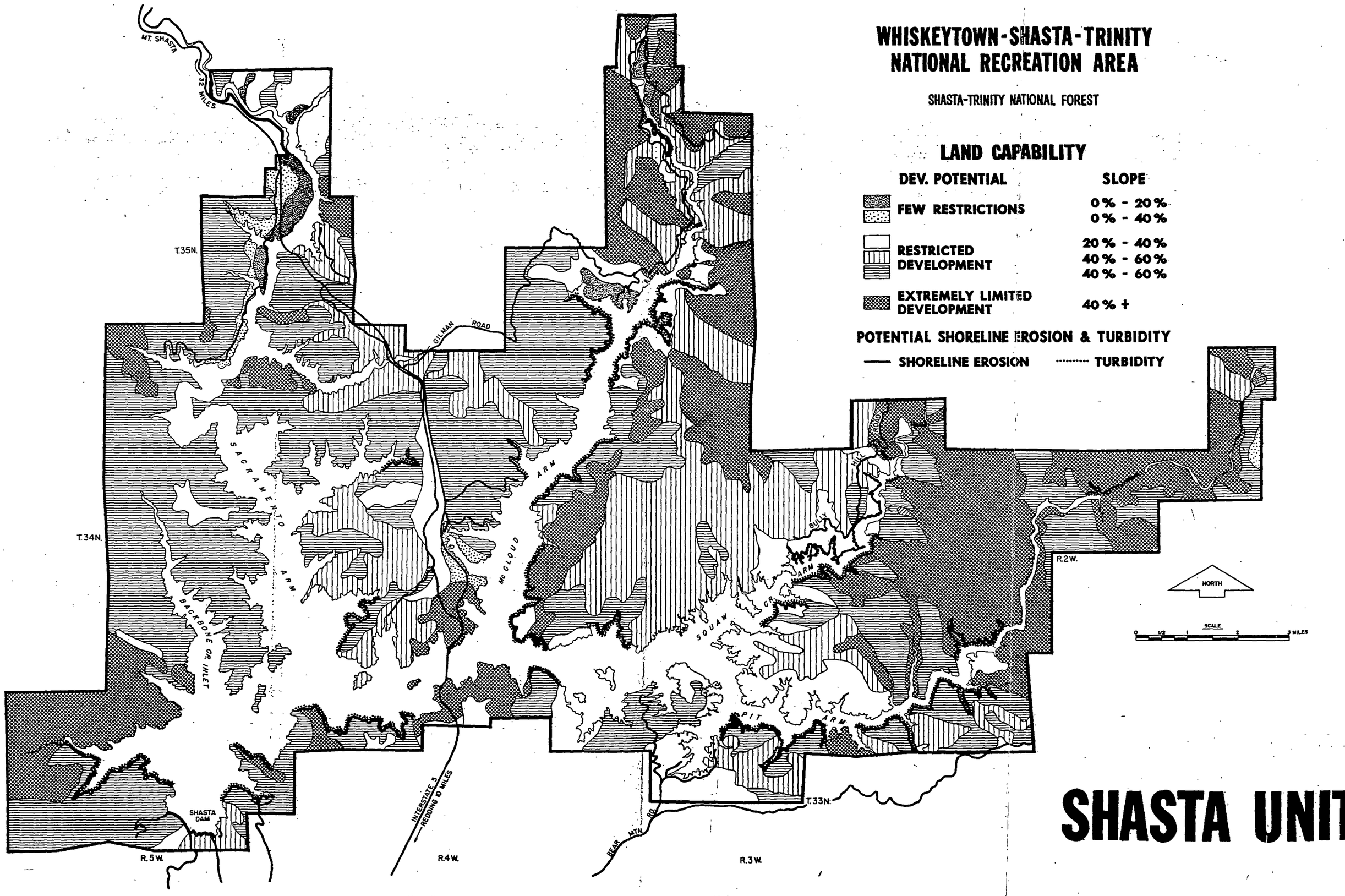
SHASTA-TRINITY NATIONAL FOREST

LAND CAPABILITY

	DEV. POTENTIAL	SLOPE
	FEW RESTRICTIONS	0% - 20%
		0% - 40%
	RESTRICTED DEVELOPMENT	20% - 40%
		40% - 60%
		40% - 60%
	EXTREMELY LIMITED DEVELOPMENT	40% +

POTENTIAL SHORELINE EROSION & TURBIDITY

— SHORELINE EROSION ····· TURBIDITY



SHASTA UNIT

WHISKEYTOWN - SHASTA - TRINITY NATIONAL RECREATION AREA

TRINITY COUNTY
SHASTA - TRINITY NATIONAL FOREST

LAND CAPABILITY

DEV. POTENTIAL		SLOPE
FEW RESTRICTIONS		0 % - 20 % 0 % - 40 %
RESTRICTED DEVELOPMENT		20 % - 40 %
	Low erodability	40 % - 60 %
	Moderate erodability	40 % - 60 %
EXTREMELY LIMITED DEVELOPMENT		40 % +

POTENTIAL SHORELINE EROSION & TURBIDITY

—— SHORELINE EROSION ····· TURBIDITY

NORTH

SCALE 0 1/2 1 2 3 MILES

R. 8W R. 7W
T. 37N
TRINITY CENTER
EAST FORK
T. 36N
T. 36N
STATE HWY. 3
R. 9W T. 35N
(CO. 106)
BLUE MTN. ROAD
T. 35N
STUART'S FORK
TRINITY DAM
T. 34N
T. 34N
TO WEAVERVILLE
TO LEWISTON
TO FRENCH GULCH
R. 9W
R. 8W
R. 7W
LEWISTON DAM

CLAIR ENGLE-LEWISTON UNIT

Map #	Owner	Descriptive Location	Legal Location	Acreage	Reason for Acquisition
103-5	Brock	Jones Valley	Sec 10, T33N, R3W	23.8	Key Visual Area from Silverthorn Road
42	Frenchman	Squaw Arm	Sec 26,T39W, R3W	63.4	Public access along shoreline-Resource protection (water quality, Scenic)
35	SCM(Glidden)	Bully Hill Mine	Sec 16,21,T34N,R3W	63.4	Historical Protection
36	" "	" " "	"	183.9	Wildlife Habitat Pro-
30	" "	" " "	"	20.0	tection
96	" "	" " "	"	155.0	
97	Dunn	Bully Hill Mine	Sec 21,T34N,R3W	19.0	Historical Protection Wildlife Habitat Pro- tection
133	Shasta Iron Mine	Ironex	Sec 26,T34N,R4W	267.6	Key Visual Area from Lake
69	Sontag	O'Brien	Sec 16,T34N,R4W	12.7	Key Visual Area from Lake
132	Portalupi	Keluche	Sec 35,T35N,R4W	480.0	Key Visual Area from Lake
134	Truitt	Digger Bay	Sec 13,T33N,R5W	240.0	Key Visual Area from Lake
40	4 Owners	Monday Flat	Sec 14,T34N,R3W	14.6	Key Visual Area from Lake

SHASTA UNIT

Map #	Owner	Descriptive Location	Legal Location	Acreage	Reason for Acquisition
300-A	Jones	Point McCloud	Sec 5,T35N,R3W	20.0	Key Visual Area from Lake
78	Silver King Mines	Dry & Squaw Forks	Sec 8,T33N,R5W	289.9	Watershed Protection & Visual
79	Hunter	West Side	Sec 6,T33N,R5W	7.3	Watershed Protection
80,82 83,86 87	U.V. Industries	West Side	Sec 4,5,6,33-T33N,R5N Sec 21,28-T34N,T5W	1224	Key Visual Area Watershed Protection
50	Mingham	West Side	Sec 23,T35N,R4W	40.0	Watershed Protection
5	Hord	McCloud Arm	Sec 21,T35N,R3W	80.0	Key Visual Area from Lake
1	Bollibokka Land Co.	McCloud Arm	Sec 36,T36N,R3W	75.0	Access to McCloud River
44	Hoover	Hycock Peak	Sec 24,T35N,R5W	160.0	Key Visual Area from Lake & Highway
74	Flintkote	Calveras Cement	Sec 2,T33N,R4W	46.6	Key Visual Area from Lake

SHASTA UNIT
SCENIC EASEMENTS ONLY

Map #	Owner	Descriptive Location	Legal Location	Acreage	Reason for Acquisition
63	Cal-Shasta Club	Salt Creek Freeway	Sec 33,T35N,R4W	50.0	Key Visual Area from Highway
135	Henson	Salt Creek Freeway	Sec 32,33,T35N,R4W	5	Key Visual Area from Highway

CLAIR ENGLE-LEWISTON UNIT

T-117	Foster	Upper Copper Creek	Sec 16,T37N,R7W	20	Watershed Protection
T-124	Gates	Enright Gulch	Sec 19,T37N,R7W	120	Watershed Protection
T-62	Stewart	Trinity Center Bluffs	Sec 9,T36N,R7W	45	Scenic Protection
T-58	Turk	Jackass Spring	Sec 22,T36N,R7W	5	Watershed Protection
T-53	Pantano	Hay Gulch	Sec 34,T36N,R7W	107	Scenic Protection
T-21	Wolff	VanNess	Sec 19,T35N,R7W	140	Scenic Protection
T-23	VanNess	VanNess	Sec 19,T35N,R7W	17	Scenic Protection
T-24	Dymesich	VanNess	Sec 19,T35N,R7W	41	Scenic Protection
T-19	VanNess	VanNess	Sec 19,T39N,R7W	10	Scenic Protection
T-18	VanNess	VanNess	Sec 27,T35N,R7W	10	Scenic Protection

CLAIR ENGLE-LEWISTON UNIT

Map #	Owner	Descriptive Location	Legal Location	Acreage	Reason for Acquisition
T-6	Weed	Eastman Gulch	Sec 33,T34N,R8W	102	Wildlife Habitat
T-5	Martin	Eastman Gulch	Sec 33,T34N,R8W	5	Wildlife Habitat
T-2	Trinity River Mining	Poverty Flat	Sec 8,T33N,R8W	64	Scenic Protection
T3-1	Dewitt	Baker Gulch	Sec 5,T33N,R8W	42	Wildlife Habitat
T3-6	Batton	Baker Gulch	Sec 5,T33N,R8W	9	Wildlife Habitat
T3-7	Fisher	Baker Gulch	Sec 5,T33N,R8W	6	Wildlife Habitat

CLAIR ENGLE-LEWISTON UNIT
TRINITY ACQUISITION

T-92	Bowen	Bowerman Ridge	Sec 35,T35N,R8W	34	Scenic Protection
T-43	Grange	Hayward Flat	Sec 27,T35N,R8W	26	Development

Appendix E

SUMMARY OF ANTICIPATED EFFECTS OF IMPLEMENTATION OF THIS PLAN
(From Final Environmental Statement)

Full utilization of the extensive recreation resource of the area will require development of facilities such as campgrounds, trailer courts, marinas, cabins, resorts, and commercial facilities —— on both private and public lands. Some loss of the natural scenic resource may therefore occur; there may be slight water quality degradation, and soil erosion might be accelerated. However, appropriate design and careful construction of these facilities, together with adequate mitigation measures, can and will minimize the damage.

Increased recreation use may cause a slight degradation of water quality through increased turbidity, increased shoreline erosion, and increased pollution from human wastes. Such degradation can be substantially offset by increased boating-use controls and increased emphasis on eliminating potential for human waste pollution through administrative regulations and the construction of floating sanitation facilities.

Other impacts on the water, soil, air and vegetation will occur from timber harvest activities on both private and public lands; from sub-division and home construction on private lands; from potential mineral exploration and development on existing mining claims and mineral deposits; and from road construction activities. Effective controls imposed by the plan on all of these activities will minimize damage to the resources.

In addition to measuring the environmental effects which would result from plan implementation, the Final Environmental Statement subjectively evaluated how the plan would meet the overall goals of the plan and furnished a comparison with the several alternatives which had been considered. It was appropriate to use these goals as yardsticks because the goals themselves are summary statements of the full range of expectations for these units. However, with one exception, the goals could not be stated in objective, quantified terms. They generally deal with intangibles and unmeasurables and could be only evaluated subjectively. In the following table an excerpt from the statement of how the selected plan meets the goals is presented subjectively using a yardstick scale (rating system) from 1 to 10, where 8-10 is excellent, 5-7 is good, and 1-4 is fair.

The exception to the subjective evaluation concerns economic goals. Here, some quantification and objective evaluation was made possible in the environmental statement by measuring dollar benefits and costs in the direct economic effects of the statement.

Goals	Shasta Unit	Clair Engle-Lewiston Unit
1. NATIONAL RECREATION AREA GOALS		
a. To conserve scenic, scientific, historic, and other values ---.	. . . 7	 8
b. To provide, at a sustained high level, the optimum high grade balanced recreation uses ---.	. . . 9	 8
c. To provide for planned use of other resources ---.	. . . 8	 8
d. To determine extent of need for development of public facilities ---.	. . . 9	 9
e. To provide guides, through participation of the respective County governments, for the development of private lands ---.	. . . 8	 8
2. FOREST SERVICE GOALS		
a. Promote and achieve a pattern of natural resource use ---.	. . . 9	 8
b. Protect and improve the quality of air, water, soil, and natural beauty ---.	. . . 8	 9
c. Generate forestry opportunities ---.		
d. Encourage the growth and development of forestry-based enterprises ---.	. . . 8	 8
e. Seek optimum forest land ownership patterns ---.	. . . 7	 8
3. NATIONAL GOALS FOR LAND USE PLANNING		
a. To enhance National economic development ---.	. . . 7	 6
b. To enhance the quality of the environment ---.	. . . 8	 8
TOTALS	88	88

INTRODUCTION

A periodic review of the Operation and Development Plan for the Whiskeytown-Shasta-Trinity National Recreation Area (NRA) has been completed. Nine key issues were identified by the interdisciplinary team and through public involvement. These issues have been analyzed according to the National Environmental Policy Act and individual decisions are provided for each area.

Few changes and variations from the original Operation and Development Plan for the NRA were made. These have been identified. The environmental analysis is written within the scope of the Final Environmental State prepared in 1976, and further documentation of the effects of the plan are not necessary. Decisions on site specific projects will be analyzed and documented as appropriate.

Review of the existing management plan for the NRA included an extensive public involvement process. Posters were displayed in key areas, news releases were made to all media, and letters were sent out to 1,081 interested parties. One hundred fifty-eight replied with comments on the various management concerns and issues. Their comments confirmed the initial 5 issues and provided four additional issues. Public meetings were held in Redding and Weaverville to help develop alternative solutions to the identified issues.

The end product of this review will be an updated Operation and Development Plan for the National Recreation Area. This document will become a part of the Land Management Plan for the Shasta-Trinity National Forests. The Land Management Plan will replace the existing Multiple Use Plan for the Forest. The Land Management Plan will establish standards, guidelines, and prescriptions which provide for a wide variety of resource outputs including timber, recreation, wildlife, watershed, and mineral values. The NRA Operation and Development Plan provides implementation direction on management of the natural resources within the NRA. Planning for the National Forest portion of the National Recreation Area calls for periodic reviews to analyze the current situation and changing needs. This revision does not include the Whiskeytown Unit of the National Recreation Area which is administered by the National Park Service.

1982 - Revision

DECISION NOTICE

AND

Finding of No Significant Impact

Operation and Development Plan for

Shasta Unit

of Whiskeytown-Shasta-Trinity

National Recreation Area

Shasta-Trinity National Forests

Shasta Lake Ranger District

The Operation and Development Plan for the Shasta and Clair Engle-Lewiston Units of the Whiskeytown-Shasta-Trinity National Recreation Area (NRA) requires periodic revision. The plan is required by law to provide direction on management of the NRA.

As part of the environmental analysis process, nine issues were identified relating to boating recreation facilities, safety, and pollution. A summary of my decisions on these issues is as follows:

- A capacity of 780 boats in overnight use on Shasta Lake will be continued in the new Plan. Current use is averaging 600 boats/night during the recreation season. Once the capacity of 780 boats is reached, a permit system will be initiated to control overnight occupancy in the coves and on the shoreline.

- The revised Plan, as in the earlier version, allows for the number of houseboats in use on Shasta Lake to increase to a planned capacity of 450. The average daily houseboat use is now at 400. Based on a use rate of 85% for commercial houseboats, an increased allocation of 53 commercial houseboats will be made for Shasta Lake in order to reach the planned

capacity. These will be allocated to existing resort marinas based on the merit of their individual proposal to a Forest Service prospectus to be issued within a few months.

The private houseboat fleet would not be increased during the next 5 years.

- The existing private houseboat permit systems would be continued on Shasta Lake.

- The revised NRA Plan allows for rehabilitation and moderate expansion of commercial facilities at existing resorts. At Shasta Lake, relocation of some marinas now in shallow water ports will be examined.

- At Shasta Lake, the areas currently used for shoreline camping will be analyzed to determine their suitability for use. Minimal facilities will be provided for water, sanitation, and trash collection and a recreation use fee will be charged. Areas where deficiencies cannot be corrected will be closed.

- Special emphasis will be given to increasing the number of floating restrooms and recreation vehicle sewage dump sites on both units. New campgrounds will be constructed only after rehabilitation and expansion of existing campgrounds has been completed, recreation use has increased, and sufficient funds become available. New and rehabilitated campgrounds that are accessible by road will include improvements that are suitable for physically handicapped users.

- Special emphasis will be given to increasing the number of floating restrooms and recreation vehicle sewage dump sites on both units. New campgrounds will be constructed only after rehabilitation and expansion of existing campgrounds has been completed, recreation use has increased, and sufficient funds become available. New and rehabilitated campgrounds that are accessible by road will include improvements that are suitable for physically handicapped users.

- Emphasis will be given to increasing the opportunity for volunteers to help in the NRA, for example, by maintaining trails, serving as campground hosts, and providing information to the public at visitor centers.

Site specific environmental analyses will be required for project actions during the implementation of these decisions.

I have determined that this action would not significantly affect the quality of the human environment. Therefore, an environmental analysis statement is not needed.

Project implementation may take place immediately.

If you disagree with this decision, you may request an Administrative Review by the Chief, Forest Service, pursuant to 36 CFR 211.19, by filing a written request with me within 30 days of your receipt of this letter. A statement of reasons supporting your request must be included or supported within 15 days of the filing of your request for review.

The NRA decisions and revised Operation and Development Plan can be reviewed at the Shasta-Trinity National Forests Headquarters, 2400 Washington Avenue, Redding, California 96001, telephone (916) 246-5222. Copies are also available for review at the Shasta Lake District Ranger's Office at Mountain Gate, and at the Weaverville District Ranger's Office in Weaverville.

James G. Smith Jr. 4/30/82

Regional Forester Date

- Emphasis will be given to increasing the opportunity for volunteers to help in the NRA, for example, by maintaining trails, serving as campground hosts, and providing information to the public at visitor centers.

Site specific environmental analyses will be required for project actions during the implementation of these decisions.

I have determined that this action would not significantly affect the quality of the human environment. Therefore, an environmental impact statement is not needed.

Project implementation may take place immediately.

If you disagree with this decision, you may request an Administrative Review by the Chief, Forest Service, pursuant to 36 CFR 211.19, by filing a written request with me within 30 days of your receipt of this letter. A statement of reasons supporting your request must be included or supported within 15 days of the filing of your request for review.

The NRA decisions and revised Operation and Development Plan can be reviewed at the Shasta-Trinity National Forests Headquarters, 2400 Washington Avenue, Redding, California 96001, telephone (916) 246-5222. Copies are also available for review at the Shasta Lake District Ranger's Office at Mountain Gate, and at the Weaverville District Ranger's Office in Weaverville.

James G. Smith Jr. — 4/30/82

Regional Forester — Date

DECISION NOTICE

AND

Finding of No Significant Impact

Operation and Development Plan for

Clair Engle-Lewiston Unit

of Whiskeytown-Shasta-Trinity

National Recreation Area

Shasta-Trinity National Forests

Weaverville Ranger District

The Operation and Development Plan for the Shasta and Clair Engle-Lewiston Units of the Whiskeytown-Shasta-Trinity National Recreation Area (NRA) requires periodic revision. The plan is required by law to provide direction on management of the NRA.

As part of the environmental analysis process, nine issues were identified relating to boating recreation facilities, safety, and pollution. A summary of my decisions on these issues is as follows:

On Clair Engle Lake an increased allocation of 30 commercial houseboats will be made. This is within the allocation set in the original plan. These will be allocated to existing resort marinas based on the merit of their individual proposal to a Forest Service prospectus to be issued within a few months.

The private houseboat fleet would not be increased during the next 5 years.

- The existing private houseboat permit systems would be continued on Clair Engle Lake.

- The revised NRA Plan allows for rehabilitation and moderate expansion of commercial facilities at existing resorts.

ISSUE #1 - THE TYPE OF RECREATION USES WITHIN THE NATIONAL RECREATION AREA - CLAIR ENGLE-LEWISTON UNIT

Present Situation

The Forest Service manages the NRA primarily for recreational activities. Many existing uses are compatible; however, others conflict with one another.

All users - housebcaters, shoreline campers, fishermen, jet skiiers, and others - share a common interest in the NRA. Each seek their own form of recreation pleasure.

Some recreationists have indicated that para-skiing, float planes, high-powered water ski boats, jet-skiing, and water slides are inappropriate uses. Others believe all types of recreation activities should be permitted.

Plan Management Direction

The legislative act which established the NRA states: "... to provide ... for the public outdoor recreation use and enjoyment ... and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters ..."

Decision

It is my decision to allow for a variety of lake uses managed in a controlled fashion.

Recreation uses of the Clair Engle/Lewiston Unit generally will revolve around the lake surface. The surrounding land surface uses will serve to complement the water oriented recreation activities rather than being an end in itself. Acceptable uses of the lake surface should include a wide variety of water oriented recreation uses and must utilize the surrounding environment in its natural state to the greatest extent possible. Recreation uses must be for the purpose of fulfilling an existing need of the public, utilizing the natural recreation resources for short term recreation (30 days or less). Development of group facilities will be encouraged. Uses not suited for public lands must be directed to private lands.

Recreation uses will be encouraged which provide for public safety and maintain a minimum impact on the environment, including noise and other socially conflicting side effects. More energy efficient uses will be encouraged.

Rural type recreation experience based on the Recreation Opportunity Spectrum will be provided within and adjacent to existing resort development. Roaded Natural and Semi-Primitive Non-Motorized recreation opportunities will be provided as indicated in Exhibit 1. Carnival type activities will not be permitted.

Examples of Uses

Acceptable Uses	Not Acceptable Uses
Camping	High Speed Boating except in front the dam as designated in the Land Use Plan Map
Fishing	
Boating	Excessive noise Carnival type uses

Since this analysis is within the scope of the existing legislative act and the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

Public Law 89-336, 79 Stat. 1295 Introduction

Public Law 89-336, 79 Stat. 1298 Hunting and Fishing, Chapter II, Title 36 CFR Part 251, Introduction

EIS - p. 58, Off Road Vehicles

EIS - p. 59, 60, Visitor Information Activities

EIS - p. 62, 64, Mitigation measures

EIS - p. 66, Air Quality

EIS - p. 67, Noise

EIS - p. 72, Fishing

EIS - p. 69-73, Uses

NRA Plan - p. 64, Public Recreation Facilities and Use

ISSUE #2 - AMOUNT OF OVERNIGHT BOATS USING CLAIR ENGLE LAKE

Present Situation

A limit was set on the total number of overnight occupancy vessels permitted to be permanently berthed on the lake. This number was established as 124 and it includes both rental and private houseboats. This allocation has not been fully utilized and there are still 18 unutilized allocations for houseboats in the rental fleet. Demand for rental houseboats continues to expand.

The original inventory to determine capacity indicated 80 miles of prime houseboating area and 72 miles of secondary use area. This initially indicated a total maximum capacity of 500 houseboats for Clair Engle Lake. However, reexamination of this inventory revealed significant errors. Therefore a second inventory was completed for this 5 year update.

This review of shoreline capacity was completed to determine primary and secondary mooring areas based on actual use observations. It was determined that 32 miles of primary mooring areas and 18.5 miles of secondary mooring area were present.

The primary mooring areas were those that operators of houseboats and other overnight occupancy vessels customarily sought out. Such areas contained the attributes of solitude, freedom from wind or waves, and good shoreline configuration generally associated with a quality houseboating recreation experience. The secondary mooring areas were those used when primary sites weren't available and lacked some of the attributes generally associated with a primary site.

It was estimated that the primary areas are utilized at a density of 4 per mile and the secondary areas at 2 per mile.

Maximum Capacity utilizing primary and secondary moorage areas:

32 miles of primary mooring x 4 per mile density	=	128
18.5 miles of secondary mooring x 2 per mile density	=	37
Total		165

For the purpose of planning it is estimated that a private houseboat is utilized 20% of the time and a rental houseboat 95% of the time during the main recreation season. Houseboats are the dominant form of boat used as overnight occupancy vessels.

Plan Management Direction

"Place an upper limit of 124 vessels for overnight occupancy which are berthed in approved moorage areas on Clair Engle Lake."

"Continue to provide for limited houseboating use on the lake."

"Permit expansion of the existing commercial houseboat fleet to 30 vessels, under existing or renewed special use permits."

"Institute a permit system for all private boats which are designed for overnight occupancy and which are berthed in approved moorage areas on Clair Engle Lake. Establish and enforce standards of sanitation and appearance for these vessels. The number of permits will be limited to the present number of such vessels now on the lake. This decision to continue the use of private houseboats will be specifically reviewed at the regular public five-year plan reviews."

"Present average daily use of 80 houseboats will be managed at the present level."

Decision

It is my decision to manage within the intent of the plan. This will be accomplished by basing the limit of boats on the capacity of the primary moorage areas. Based on the inventory this would provide 128 moorage areas.

This decision meets the intent of the existing NRA Plan as noted in the following excerpts:

1. "Continue to provide limited houseboating use on the lake."

2. The plan for the Clair Engle/Lewiston Unit calls for a strong emphasis on the retention of the natural forested outdoor environment (pg. iii) preface to the EIS.

3. "To provide, at a sustained high level, the optimum high-grade balance recreation uses...." (pg. 4 Goals)

4. "Provision for a variety of recreational opportunities for people of all economic levels consistent with maintaining a quality experience." (pg. 4 Goals)

Since this analysis is within the scope of the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

EIS p. 51, Lake Surface Overnight Occupancy Control

EIS p. 70, 71, 72, Houseboating

EIS p. 96, II Recreation - Item A2

NRA Plan - p. 59, Management Direction

NRA Plan - p. 61, General Water Management

NRA Plan - p. 61, Lake Surface Occupancy Control

NRA Plan - p. 62, Powerboating

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING CLAIR ENGLE LAKE

SUB ISSUE 2A - THE PROPORTION OF COMMERCIAL TO PRIVATE HOUSEBOATS USING CLAIR ENGLE LAKE

Present Situation

The 1976 Land Use Plan and E.I.S. for the National Recreation Area recognized a maximum number of houseboats that could be in use on an average day and still maintain a quality recreation experience. To keep within this maximum, a limit was set on private and rental houseboat numbers. The maximum number of houseboats authorized in the plan has been allocated; therefore, no additional houseboats were available under the existing plan. There is, however, a large demand for both private and commercial houseboats on the lake.

Public input to the 1981 plan revision included maintaining the present numbers, increasing numbers, decreasing numbers, and changing the mix of private and commercial houseboats.

Houseboating is a unique and very popular activity. The lake's irregular shoreline, vegetation, warm water in summer, variety of sport fisheries, and associated recreation water activities are all attributes which make houseboating popular. Houseboating is most popular in the summer months between May and September, however, it occurs year round.

There is a significant number of people who want a private houseboat permit. There is an even greater number of people who want to rent a commercial houseboat each year but are unable to find an available rental. Typically, all commercial houseboats are booked for rental prior to May each year. Resort/marinas have requested additional houseboat allocations.

Private houseboats represent an exclusive use of Shasta Lake, while commercial houseboats are available to the general public. Presently, 41% of the houseboats are allocated to the commercial fleet and 59% to the private fleet.

There are 74 private houseboats and 50 commercial houseboats permitted on Clair Engle Lake. Private houseboats are utilized approximately 20% of the time during the recreation season. Rental houseboats are utilized about 95% of the time during the recreation season. The private fleet allocations are all utilized but there are 18 unused boat allocations in the commercial fleet.

Plan Management Direction

The following direction is provided by the NRA Management Plan:

The 1976 NRA Land Use Plan placed the following limits on houseboats and/or overnight occupancy boats.

- "Permit expansion of existing commercial houseboat fleet to 50 vessels, under existing or renewed special use permits."

  After the 1976 NRA plan was approved, commercial houseboats were allocated to resorts, based on the number identified in their special use permit. Resorts with permits which did not specify numbers of houseboats were

allocated the number of boats they had at the beginning of the NRA planning process.

- "Institute a permit system for all private houseboats which are designed for overnight occupancy and which are berthed in approved moorage areas on Shasta Lake. The number of permits will be limited to the number of such vessels now on the lake."

  The intent and purpose of the plan was to keep houseboat use well within the capacity of the coves and lakeshore to accommodate houseboats overnight and still maintain a quality recreation experience for all lake users.

Decision

It is my decision increase the commercial houseboat limit and do not increase private houseboats.

This alternative will allow for an increase in the rental houseboat fleet to meet developing public demand. It allocates inceases to the rental fleet where utilization is greater and where greater recreation opportunity is available to all the public. Based on existing utilization rates of 20% for private houseboats and 95% for rental houseboats, as well as the need to provide moorage locations for temporary overnight occupancy boats, the following distribution is made:

74 private houseboats[1/]
37 temporary overnight occupancy boats
30 additional rental houseboats to existing 50

Since this analysis is within the scope of the Final Environmental Statement (FES), completed in 1976, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

EIS - p. 70, Houseboating

NRA Plan - p. 59, Management Direction

NRA Plan - p. 62, Lake Surface Overnight Occupancy Control

[1/] The number of additional houseboats is determined as follows:

a)	Capacity of primary moorage areas	=	128 total
b)	Less private houseboat fleet (74) utilized 20% of the time.....	=	-15
			113
c)	Temporary overnight occupancy boats	=	-37
d)	Unadjusted number of houseboats available to rental fleet.....	=	76
e)	Rental fleet is used 95% of the time available during the primary use season (76 ÷ .95).....	=	80
f)	Less existing rental fleet	=	-50
g)	Additional houseboats available for the rental fleet.....	=	30

ISSUE NO. 2: THE TOTAL AMOUNT BOATS USING CLAIR ENGLE LAKE

SUB-ISSUE 2B - THE REGULATION OF OVERNIGHT BOATS INCLUDING CABIN CRUISERS USING CLAIR ENGLE LAKE

Present Situation

Overnight boats include a wide variety of vessels equipped with overnight accommodations, either permanent or portable. These boats include large runabouts, cruisers, and patio boats. Public input to the 1981 plan revision identified a number of concerns.

Concerns associated with cabin cruisers included regulating the number of overnight occupancy boats. Other concerns included sanitation, and the the size of the wake caused by the large cruisers' displacement or deep "V" type hull design. At present, permanently installed sanitation facilities (toilets) on overnight boats are not inspected to insure that they cannot dump septage directly into the lake. Wake size is not controlled on the lake, except indirectly through speed restrictions such as 5 mph zones which are applicable to all boats.

Only limited numbers of cabin cruisers have been used on Clair Engle Lake and then only for limited periods.

Plan Management Direction

The following direction was established in the 1976 Use Plan: "Institute a permit system for all private boats which are designed for overnight occupancy, and which are berthed is approved moorage areas on Clair Engle Lake. Establish and enforce standards of sanitation and appearance for these vessels."

"The number of permits will be limited to the number of such vessels now on the lake."

Decision

It is my decision to continue with present management direction that would include cabin cruisers in the category of overnight vessels. The cabin cruiser must be within the number allocation for overnight vessels or limit its use to 30 days per year.

Since this analysis represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

NRA Plan p. 61, General Water Management and Zoning

NRA Plan p. 62, Lake Surface Overnight Occupancy Control

NRA Plan p. 59, Management Direction

NRA Plan p. 42, Recreation

EIS p. 48, General Water Management and Zoning

EIS p. 50, Lake Surface Overnight Occupancy Control

EIS p. 70, Houseboating

EIS p. 80, Water Quality

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING CLAIR ENGLE LAKE

SUB-ISSUE 2C - PRIVATE HOUSEBOAT PERMIT SYSTEM USING CLAIR ENGLE LAKE

Present Situation

As a result of the 1976 Land Use Plan, a private houseboat permit system was initiated for the purpose of controlling the numbers of private houseboats and establishing and enforcing standards of sanitation and appearance for these vessels. Public input to the 1981 plan revision included methods of changing the permit system, ways to eliminate the permit system while maintaining controls, and additional controls to the existing permit system.

All houseboats moored on Clair Engle Lake as of April 1, 1977, were issued a permit which resulted in 74 private houseboat permits. Houseboats placed on the lake for less than 30 days each calendar year are not required to have a permit.

The permit system has worked well for controlling the number of houseboats on Clair Engle Lake, although there have been minor violations. When the permit system began, an intensive inspection program was initiated which covered sanitation, conformance to state and Coast Guard regulations, appearance and integrity of the vessel, compliance to safety and code requirements, etc. Inspections were timely and costly. The intent of the program was to control numbers and enforce standards of sanitation (water quality) and appearance.

Normally, houseboats can be found for sale at any time since there is a fairly high turnover rate in ownership. Under the existing permit system, permits have been automatically transferred from one owner to the next. No fee has been charged for the permit or the transfer. While the permit has no value in itself, it has accrued a value because the numbers have been limited and the demand remains high.

The Forest Service may terminate a private permit for the following reasons: To protect public health, safety, and welfare; and to enhance and protect the lake environment and the recreation opportunities provided. These terminations could take place at the time of sale or by drawing. Several permits have been terminated for non-compliance with permit terms.

There is a significant number of people wanting to get a private houseboat permit. If conditions remain unchanged, there will be little or no opportunity for them to obtain one unless they pay a premium and purchase an existing houseboat.

Private houseboat owners have a large investment in their houseboats and permits. Permit cancellation could cause them to lose their investment.

Limiting the numbers of houseboats and automatically transferring the permits upon sale increases the resale value of the houseboat. In reality, private houseboat owners are selling a permit (which was originally free) by adding $5,000 to $10,000 to the selling price of a houseboat with a permit.

Plan Management Direction

Direction contained in the 1976 plan states:

"Continue to provide for limited houseboat use on Clair Engle Lake."

"Institute a permit system for all private boats which are designed for overnight occupancy, and which are berthed in approved moorage areas on Shasta Lake. Establish and enforce standards of sanitation and appearance for these vessels. The number of permits will be limited to the number of such vessels now on the lake."

"Prohibit residential occupancy of the lake surface for continuous and/or intermittent periods in excess of 30 days per season without a permit."

The Environmental Impact Statement for the plan under "Environmental Effects of the Plan" states, "in houseboating, however, it is both feasible and - without question - necessary to control the total number of vessels used for this purpose which are permanently berthed on the lakes. Normally, there are very few houseboats which are brought to the lakes and launched for vacation periods and removed at the end of that period. No control over these boats is planned at this time, but controls may be invoked if numbers begin to exceed the present nominal amount."

Decision

It is my decision to continue with the current management direction.

Since this analysis represents no change from the Final Environmental Statement (FES), completed in 1976 for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

NRA Plan - p. 61-62, General Water Management and Zoning

EIS - p. 70, Houseboating

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA, Claire Engle LAKE

SUB-ISSUE 2D: SIZE OF BOATS

Present Situation

The 1976 Land Use Plan established a maximum length and width for boats on Shasta Lake and Claire Engle Lake. Public input to the 1981 plan revision ranged from abolishing size limits to reducing size limits.

The private houseboat permit system and the commercial houseboats under permit were allowed maximum size of 15' wide and 50' long. No restriction was placed on boat height.

Over the past 5 years the average houseboat size has increased to the maximum size limits. Small houseboats have either been sold off the lake or junked and the permit transferred to a larger boat.

Presently the maximum width boat which can be transported on Interstate 5 is 15 feet wide with a permit issued from the local Cal Trans office in Redding. Boats wider than 15 feet must have a special permit issued from the Cal Trans office in Sacramento. Permits for boats wider than 15 feet have generally been refused.

Boats with lengths to 135 feet and widths to 15 feet may be transported on Interstate 5 and County road systems, depending on the capability of the road and within weight guidelines.

While boat lengths in excess of 50 feet can easily be transported to and from Clair Engle Lake, length has a direct relationship to maneuverability of the boat on the water. There is no licensing or age requirement for operating large houseboats. Rental and private boats are often operated by inexperienced and intoxicated operators. Some operators have never driven a boat, and many boat operators have never driven a boat the size and weight of a houseboat.

A 50 foot boat has the capacity of 12 people living on the boat at one time for up to two weeks.

Most marinas are designed and constructed to accommodate a 50'x15' boat. Larger boats would, in some cases, require modification of marina facilities to accommodate them

Boat height for transportation is governed by clearances under utility lines, bridges, and overpasses.

There has been one official request for a larger private houseboat. Most people are satisfied with the existing limits.

Plan Management Direction

Direction contained in the 1976 plan states: "Set a maximum length of 50 feet and a maximum width of 14 feet for any boat on Shasta Lake, except for special uses under permit."

Current management direction allows boats 15 feet wide and 50 feet long which are under permit.

Decision

It is my decision to maintain the present limitation of 50 feet for boat length and increase the limitation from 14 feet to 15 feet for boat width. This decision will essentially continue the present situation on Clair Engle and will have little overall effect.

It will also allow the approval of larger boats for special purposes to meet the needs of the general public and lake management, within the guidelines of the overall management plan.

Since this analysis represents little change from the Final Environmental Statement (FES), completed in 1976 for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

NRA Plan - p. 61, General Water Management

EIS - p. 48, General Water Management and Zoning

ISSUE #3 - DISPERSING AND/OR LIMITING THE NUMBER OF POWER BOATS USING CLAIR ENGLE LAKE

Present Situation

The 1976 Land Use Plan designated boating restrictions on certain areas of Clair Engle Lake. These restrictions included 5 mph areas, no skiing areas, and no houseboating areas. A 40 mph speed limit covers the balance of the lake except for an unrestricted speed zone just north of the dam. Public input to the 1981 plan revision varied from elimination of zoning to increased zoning.

A variety of water-oriented recreation activities occur within the NRA. However, not all uses are compatible. Conflicts arise because of speed, noise, boat size, and type of use. These conflicts tend to lower the quality of recreation experience for others.

Some 5 mph designations were used to protect developed sites and meet requirements of state boating law, however, most were designated to protect favorite fishing coves and inlets to maintain a favorable fishing environment. Most of the 5 mph designations have been buoyed, covered by county ordinances, and enforced by the County Sheriff.

Some people feel that all restrictions in the plan should be implemented, while others feel that no additional restrictions are needed, or possibly prefer the elimination of all restrictions. A segment of the recreation users feels that user conflict is presently occurring in several areas of the lake, and the 1976 plan restrictions should be implemented to take care of this conflict.

The amount of boats on Clair Engle (Trinity) and Lewiston Lakes is relatively low as compared to Shasta Lake.

Plan Management Direction

Management direction from the NRA Plan includes:

1. Manage for powerboating use to increase from 315 powerboats per day to an estimated 600 per day.

2. Place an upper limit of 124 vessels designed for overnight occupancy which are berthed in approved moorage areas.

3. Require that all vessels unoccupied for periods in excess of 24 hours be stored only at approved moorage sites.

4. Prohibit residential occupancy on the lake surface for continuous periods in excess of 30 days.

5. Continue the present 10 mph speed limit on Lewiston Lake.

6. Add Squirrel Gulch as a 5 mph zone.

7. Establish a maximum speed limit of 40 mph for the balance of Clair Engle Lake, except maintain as an unrestricted speed zone the area just north of the dam.

8. Permit the expansion of commercial moorage to a total of 500 slips.

9. Allow no private docks to be constructed under special use permit.

10. Allow powerboating to increase with restrictions only as needed for control of noise levels and to assure public safety.

Decision

It is my decision to continue with current management direction.

The management direction contained in the NRA Plan adequately meets the needs raised by this issue.

Since this analysis represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

EIS - p. 45, Management Direction

EIS - p. 48, General Water Management and Zoning

EIS - p. 50, Lake Surface Overnight Occupancy Control

EIS - p. 80, Mitigation Measures - Water Quality

ISSUE #4 - ADDITIONAL AND/OR EXPANDED COMMERCIAL SERVICES IN THE CLAIR ENGLE UNIT OF THE NRA

Present Situation

Resort/marina permittees want to expand their facilities and offer additional services such as night clubs, restaurants, restaurants on islands, dry boat storage, paddle boats, dining and entertainment boats, overnight lodging, float planes, and ski and sailing schools.

Requests have also been made by private parties to develop new resorts and set up floating food and drink services. A proposal has been made to provide floating camper platforms which would enable self-contained RV's to become temporary houseboats. The anticipated rental rates would be significantly lower than current houseboat rental rates.

Some NRA users have recommended that no additional services be provided. They feel that present services are adequate -- more services would degrade the environment or lead to crowding. On the other hand, others have indicated that additional services would be good for the economy.

Plan Management Direction

The existing NRA plan identifies specific commercial service guidelines by unit:

Trinity Unit

- Permit expansion of commercial moorage not to exceed 500 slips. Public needs should be reflected in development plans and schedules.

- Encourage the private development of dry land boat storage where feasible.

- Retain existing resorts and resort marinas. Plan for an additional marina in the northeastern portion of Trinity Lake when such a development would be economically feasible and of necessity to the public.

- Allow expansion of existing resorts, marinas, or combinations of these public use facilities under the following guidelines:

  a. Existing or new facilities must further the recreation potenial of the lake and its environs. These facilities should be within use capacity as projected by the entire plan.

  b. All expansion must be integrated with and utilize the surrounding environment in its natural to the greatest extent possible with minimal disturbance.

  c. The facilities proposed must fulfill a then-existing need by the public and utilize the natural resources for short term recreation (periods of 30 days or less).

In addition to the above, county zoning standards have been developed to control private land development.

Decision

It is my decision to continue with current plan direction the alternative which allows rehabilitation of existing facilities and moderate expansion. This alternative will allow for a controlled expansion of the commercial services to the capabilities of the resources.

It will allow for rehabilitation of outmoded facilities and moderate expansion into activities which will compliment the water oriented recreation. This alternative will sustain a rural recreation experience within and adjacent to existing resorts. Roaded Natural, Semi Primitive Motorized, and Semi Primitive Non-Motorized recreation opportunities will be provided as indicated in Exhibit 1.

Commercial services at the existing resorts will be allowed to expand, furthering the recreation potential of the lake, but staying within the total use and environmental controls projected by the plan.

All expansion must be integrated with and utilize the surrounding environment in its natural state. Carnival type activities will not be permitted. Uses on the land surface surrounding the lake must serve to complement the outdoor water and forest oriented recreation activities rather than being an end in itself. All relocations, rehabilitation, and expansion will be accomplished only through an approved Site Development Plan and appropriate analysis based on the National Environmental Policy Act.

Examples of Uses

Typical Acceptable Uses	Typical Not Acceptable Uses
Boating	Bar with no Restaurant
Minimum supply stores	Carnival type uses
Minimum warehousing and shop	Dining and Entertainment boats
Minimum employee housing	Floating and moving concessionare boats
	Resorts with emphasis on restaurant and nightclub operation to serve local communities rather than to serve water oriented outdoor recreation

Since this analysis is within the scope of the existing legislative act and the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

Chapter II, Title 36 CFR 251, General Provisions, Standards

EIS - p. 49, Water Use Facilities

EIS - p. 55, Public Recreation Facilities and Use

NRA Plan - p. 64, Public Recreation Facilities and Use County Zoning Ordinance - Trintity County

EIS - p. 54, Private Land Development

EIS - p. 54, Public Recreation Facilities and the

EIS - p. 62, Mitigation Measures - Soils and Landscape

EIS - p. 64, Mitigation Measures - Visual

EIS - p. 80, Mitigation Measures - Water Quality

EIS - p. 97-98, Recreation Facility Development

NRA Plan - p. 62, Water Use Facilities

NRA Plan - p. 64, Public Recreation Facilities and Use

CLAIR ENGLE-LEWISTON UNIT

ISSUE NO. 6: SANITATION/POLLUTION/WATER QUALITY OF THE NRA
ISSUE NO. 7: SAFETY/PUBLIC SAFETY IN THE NRA
ISSUE NO. 8: LAW ENFORCEMENT WITHIN THE NRA

Present Situation

Issues expressed by the public concerning sanitation and safety are heavily dependent on the issue of law enforcement. They all tend to be interrelated. There appear to be sufficient regulations to cover sanitation and safety, however, enforcement of those regulations is necessary. Sub-issues under these general headings included methods of accomplishment, better controls, methods to reduce cost, and ways to better inform the public.

Sanitation/Pollution/Water Quality

Noise Pollution

There are many boats on the lake, some dry stack and some wet stack, which exceed the legal decibel noise limit. Forest Service employees receive many complaints, especially about loud power boats. There are other sources of noise pollution, however, none are as dominant as noise from power boats. The responsibility for enforcement lies with the County Sheriff's Department.

Water Pollution

Based on complaints from the general public, there is an increasing amount of water pollution. Increased costs of pumping boat septic holding tanks and uninspected boat holding systems are probably contributing factors. Another contributing factor is the fact that there is no convenient place to dump porta-potties around the lake. Even with the increased reports of water pollution, the overall water quality of Clair Engle remains good to excellent.

Litter and Garbage

Litter and garbage continue to be an unnecessary nuisance within the NRA. It does not appear to be increasing from year to year; however, the litter and garbage problem does exist.

Law Enforcement

There is a definite increase in law enforcement needs. During the last few years, and 1981 in particular, there has been an increase in vandalism, theft, and rowdy parties in campgrounds.

Based on the complaints received by the Forest Service from the boat users, drinking and just plain disregard for laws, regulations, and the enjoyment of others seems to be an increasing problem. While law enforcement needs are increasing, the budgets of the two agencies, Forest Service and County Sheriff, are shrinking.

The Forest Service provides funds to the Sheriff's Department for increased patrols of land-based facilities, however, these funds have been cut and fewer patrols are predicted for the future.

Public Safety

Public Safety is an issue that many people feel strongly about and several topics have been included within this category. General boating safety, medical aid and rescue, lake hazards, too many boats, and motorcycles are the things most of the people are concerned with. Some areas are related to enforcement of existing laws, while others are not.

The Forest Service has a program to mark boating hazards. The major problem, however, is that it is not possible to mark all hazards with the fluctuating lake level. In addition, funds for marking hazards are decreasing to the point that it is difficult to maintain the existing hazards, much less install new markers. Each year there are incidents of boaters hitting unmarked hazards and causing boat damage and, in some cases, personal injury. The lower the lake level, the higher the risk of hitting a submerged unmarked hazard.

In the past several years the Forest Service lake patrol has been cut back, therefore, they provide less service to the public.

Resorts and marinas are inspected on a regular basis to insure conformance to known safety codes.

Most debris washed into the lake by the tributary drainages is removed from the lake to protect boater safety. Forest Service and resort water systems are tested to county standards to insure safe domestic water.

Plan Management Direction

The 1976 plan contains the following direction:

- Mark all navigational hazards. These include log booms used as breakwaters and overhead cable used for mooring.

- Continue lake sweeping operations and, if feasible, capture debris at entry points to the lake.

- Construct floating sanitation units as needed for the boating public, including provisions for portable-toilet waste disposal.

- Recommend a county ordinance requiring inspection of all vessels equipped with sanitation devices. All such vessels will be inspected on a regular basis by the Forest Service or the COunty Sheriff's Lake Patrol.

- Recommend a county ordinance which requires installation of approved sanitation devices on all boats designed for overnight occupancy.

- Dispersed camping controls will be implemented in two steps as necessary:

  1. Begin with a strong education program to gain voluntary compliance with fire, sanitation, solid waste disposal and site protection measures.

2. If the education program fails, institute permit system with adequate patrol and law enforcement activities to gain compliance.

- In addition, there are Federal, State and local laws that regulate many of the items that were addressed.

- There are State and local laws that place limits on noise.

- The dumping of waste into waterways is addressed by State and local laws.

- Federal regulations prohibit pollution, littering, and disposal of garbage.

Decision

It is my decision to continue the current management direction contained in the 1976 Land Use Plan for the National Recreation Area. Special emphasis will be placed on the following:

1. Increase the number of floating toilets. A minimum of 6 should be acquired and anchored on Clair Engle Lake.

2. Increase the availability of recreational vehicle dump stations.

3. Increase use of volunteers, such as individuals, Coast Guard Auxiliary, Chamber of Commerce, and clubs, and initiate community projects.

4. Increase enforcement of speed and noise limits on the lake.

5. Emphasize information and management at key NRA entry points and portals.

6. Strengthen the hazard marking program and modify the wording in the plan. The agency cannot continue to try to mark all hazards as stated in the plan; however, it should concentrate on the marking of those land form hazards which it feels are serious threats to the boating public in main channels and major use areas, and publish and distribute hazard charts for users showing all hazards, including trees. The hazards of trees left standing in the lake are impossible to mark with existing manpower and budget limitations and will, therefore, not be marked. The boating public must assume some responsibility for their own safety. Emphasis should be placed on better informing the public of possible unmarked hazards.

Since this represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on management direction and effects analysis.

NRA Plan - p. 61, General Water Management Zoning

NRA Plan - p. 62, Powerboating

NRA Plan - p. 62, Lake Surface Overnight Occupancy

NRA Plan - p. 64, Public Recreation Facilities and Use

EIS - p. 66-67, Air Quality

EIS - p. 67, Noise

EIS - p. 75-81, Water Quality

EIS - p. 88, Item II,A,1

EIS - p. 89, Item II,B,2

EIS - p. 93, Item XII,3

EIS - p. 94, Item XII,4

CLAIR ENGLE-LEWISTON UNIT

ISSUE NO. 9 - FOREST SERVICE RECREATION FACILITIES AND MANAGEMENT

Public concerns as they relate to this issue are divided into six sub-issues for the sake of clarity: Campgrounds, Boat Ramps, Swimming Areas, Handicapped Facilities, Sanitation, Trash, Restroom Facilities, and Wildlife.

Subject matter in this section pertains to land-based recreation, as opposed to water-oriented recreation. It also addresses facilities and services that may fall under the Forest Service's authority to do something about.

SUB-ISSUE A - CAMPGROUNDS

Present Situation

Some people have indicated there is a need for more campgrounds to disperse use. Others expressed a need to keep campgrounds or parts of campgrounds open all year. Keeping certain campgrounds open during hunting season is particularly important. Attention has been focused on the general condition of sites and facilities and the need for more maintenance.

Some people expressed a need to keep campgrounds open all year. Others expressed concern about the condition of developed sites and facilities. Clair Engle and Lewiston Lakes have an adequate number facilities to meet current and forseeable recreation use requirements within the next five years.

Most campgrounds are closed during the off-season to stay within operating budgets. Sufficient number of campgrounds remain open to adequately meet off season needs. Sites and facilities are rehabilitated on a priority basis as funds permit.

Plan Management Direction

Attempt to meet the average summer weekend camping needs. Provide 300 additional campground spaces on public land for auto and boat access during the plan period. Encourage private land development of facilities which would include cabins and trailer parks.

Close areas to dispersed camping, as necessary, adjacent and contiguous to existing campgrounds or where such use conflicts with wildlife or other resources. Establish camping stay limits as appropriate.

Decision

Since campground spaces are available, except on peak holiday weekends around Shasta Lake, it is my decision to maintain the current management direction in the NRA Operation and Development Plan. As funds become available, existing facilities will have first priority for rehabilitation and expansion. After existing facilities in key recreation use areas have been rehabilitated, new construction will be initiated as use requires and funding permits. The majority of campgrounds will continue to be closed in the off-season in order to stay within current operating budgets. Advance information on camp site availability will be provided at North and South Arrival Stations as funding

permits. In selected campgrounds standards will be reduced for cleaning, operation and maintenance to finance longer open season. Any decision will be documented with appropriate analysis based on the National Environmental Policy Act.

SUB-ISSUE B - BOAT RAMPS

Present Situation

Concern has been expressed about the need to extend ramps during low water levels. The need for more courtesy docks was mentioned as well. The Minersville boat ramp (Clair Engle Lake) was singled out as lacking high water level use capability and too narrow and steep and in need of improvement. Parking at the Tannery Gulch Boat Ramp conflicts with the objective of providing a quality camping experience.

Plan Management Direction

Plan no additional launch facilities. Improve existing facilities and extend ramps to 980 feet. Improve the Baily Cove Boat Ramp. No additional facilities will be constructed for day use except boat launching and mooring facilities necessary to meet planned use.

Decision

It is my decision to maintain current management direction. At present, parking and ramp capacity is adequate to handle existing use during low water levels -- though available low water ramps may require a recreationist to launch from a ramp other than their favorite. Recreation use and ramp/parking facilities will continue to be monitored. Additional boat ramp facilities will be provided depending on increased recreation use levels and planned lake capacities. The Minersville boat ramp will be modified to insure safety user convenience for water levels experienced during the use season. The parking conflicts at Tannery Gulch will be corrected.

SUB-ISSUE C - SWIMMING AREAS

Present Situation

This issue does not apply to Clair Engle Lake since swimming beaches are provided at several sites. Lewiston Lake temperatures is too cold for swimming.

SUB-ISSUE D - HANDICAPPED FACILITIES

Present Situation

The need for handicapped access facilities has been brought to the Forest Services' attention.

Plan Management Direction

The existing management plan calls for modification of up to 30 percent of existing facilities to meet the needs of the handicapped users.

Decision

It is my decision to implement current Forest Service Manual direction to eliminate architectural barriers which prevent the use or enjoyment of recreation attractions. New and rehabilitated sites which are accessible by road should be designed to adequately service physically handicapped participants. These parking areas, toilet facilities, camp and picnic units, and circulation patterns must be designed to reflect the needs and number of anticipated handicapped users.

SUB-ISSUE E - SANITATION

Present Situation

Public comments have reflected a need for more public restrooms and dump stations, as well as increased trash collections.

Plan Management Direction

Construct floating sanitation units as needed. Provide public restrooms in recreation areas and insure adequate trash collection.

Decision

It is my decision to continue current management direction. Floating toilets will be constructed as needed. Public restrooms will be provided in all recreation areas including popular dispersed camping areas. Insure adequate trash collection both on and off the lake. Provide dump stations in centralized areas which serve a number of major use areas.

SUB-ISSUE F - WILDLIFE

Present Situation

The conflicts between recreationists and wildlife has been brought to the Forest Service's attention. However, early in the planning process, it was decided that all wildlife concerns would be addressed in the Forest Land Management Planning process to eliminate duplicate efforts.

Plan Management Direction

The existing NRA plan gives extensive direction for the maintenance of fisheries and wildlife habitat. It also provides direction of rare and endangered plants and animals. A warm water fish habitat plan is being finalized which addresses part of this problem. Territory managementr plans have been developed and partially implemented for all eagle nesting sites.

Decision

It is my decision to continue present management direction and program outlined in the Forest Land Management Plan.

Since the analysis on sub-issues of this general issue represent either no change or very little change from the Final Environmental Statement (FES),

completed in 1976, a categorical exclusions is appropriate. Refer to the following for additional information on current management direction and effects analysis:

Campgrounds

NRA Plan - p. 59, Unit Management Direction

NRA Plan - p. 64, Public Recreation Facilities and Use

EIS - p. 89, Item II,B,1

Boat Ramps

NRA Plan - p. 61, Water Use Facilities

EIS - p. 91, Item II,6

Swimming Areas

NRA Plan - p. 59, Unit Management Direction

NRA Plan - p. 62, Swimming

EIS - p. 91, Item III,8

Handicapped Facilities

NRA Plan - p. 59, Unit Management Direction

Sanitation

NRA Plan - p. 61, General Water Management and Zoning

NRA Plan - p. 62, Lake Surface Overnight Occupancy Control

EIS - p. 80, Mitigation Measures

Wildlife

NRA Plan - p. 60, Unit Management Direction

NRA Plan - p. 62, Fishing

NRA Plan - p. 65, Wildlife

EIS - p. 82, Wildlife

EIS - p. 88, Item II,A,3

EIS - p. 90, Item II,B,6

EIS - p. 91, Item VI

EIS - p. 92, Item VII

ISSUE #1 - THE TYPE OF RECREATION USES WITHIN THE NATIONAL RECREATION AREA - SHASTA LAKE UNIT

Present Situation

The Forest Service manages the NRA primarily for recreational activities. Many existing uses are compatible; however, others conflict with one another.

All users - houseboaters, shoreline campers, fishermen, jet skiiers, and others - share a common interest in the NRA. Each seek their own form of recreation pleasure.

Some recreationists have indicated that para-skiing, float planes, high-powered water ski boats, jet-skiing, and water slides are inappropriate uses. Others believe all types of recreation activities should be permitted.

Plan Management Direction

The Legislative Act which established the NRA states: "... to provide ... for the public outdoor recreation use and enjoyment ... and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters ..."

Decision

It is my decision to allow for a variety of the lake uses managed in a controlled fashion.

Recreation uses of the Shasta Unit generally will revolve around the lake surface. The surrounding land surface uses will serve to complement the water oriented recreation activities rather than being an end in itself. Acceptable uses of the lake surface should include a wide variety of water oriented recreation uses and must utilize the surrounding environment in its natural state to the greatest extent possible. Recreation uses must be for the purpose of fulfilling an existing need of the public, utilizing the natural recreation resources for short term recreation (30 days or less). Development of group facilities will be encouraged. Uses not suited for public lands must be directed to private lands.

Recreation uses will be encouraged which provide for public safety and maintain a minimum impact on the environment, including noise and other socially conflicting side effects. More energy efficient uses will be encouraged.

Rural type recreation experience based on the Recreation Opportunity Spectrum will be provided within and adjacent to existing resort development. Roaded Natural and Semi-Primitive Non-Motorized recreation opportunities will be provided as indicated in Exhibit 1. Carnival type activities will not be permitted.

Examples of Uses

Acceptable Uses	Not Acceptable Uses
Camping	High Speed Boating
Fishing	
Boating	Excessive noise Carnival type uses

Since this analysis is within the scope of the existing legislative act and the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

Public Law 89-336 - 79 Stat 1295 Introduction

Public Law 89-336 - 79 Stat 1298 Hunting and Fishing

EIS - p. 54,55,56,57 - Public Recreation Facilities and Use, Wildlife

EIS - pg. 58, Off Road Vehicle Use

EIS - p. 62 and 64, Soil and Landscape, Mitigation Measures, Item 6

EIS - p. 67, Recreation, Item 1

EIS - p.59-60, Visitor Information Activities

EIS - p. 67, Noise

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA LAKE

Present Situation

The 1976 Environmental Statement and NRA Plan allowed daily use of houseboats to expand from a then existing 330 to 450 houseboats on an average daily use basis during the basic recreation season. Public input in the FY 1981 review of this Plan identified the number of overnight occupancy boats as an issue which was in need of reassessment.

Houseboating has continued in popularity, with an increase from an average use of 330 houseboats to an average daily use of 400 in 1981. Overnight shoreline use, other than houseboats, has averaged 200 boats or camps per night. For the purpose of this planning effort average daily use refers to the number of boats on the lake at any one time averaged over the primary recreation use season.

The inventory of favorite mooring spots on Shasta Lake, completed in 1976, indicated a total capacity of 780 overnight boats. Currently, the use of these mooring spots averages 400 houseboats and 200 shoreline campers and other overnight boats, totaling 600 average daily users. At this time the capacity has not been reached. Many areas of the lake could allow for increased use.

The current direction limits average daily use to 450 houseboats. Use inventories completed over the last five years show that utilization of commercial houseboats is 85%, and private houseboats is 15% usage. In other words, 100 commercial houseboats moored on the lake would be expected to result in an average daily use during the primary recreation season of 85 boats on the lake at any one time. This is the reason that the 869 (393 commercial + 476 private) houseboats on the lake in 1981 resulted in an average daily use of only 400 boats.

After review of shoreline mooring utilization, water surface acres, and current use, it was determined that the average daily use potential is not being fully utilized. Therefore, it could be possible the allow increased number of houseboats and still stay within the 450 average daily use limitation.

Plan Management Direction and Environmental Statement Parameters

"Permit expansion of existing commercial houseboat fleet at 380 vessels, under existing or renewed special use permits."

"Institute a permit system for all private boats which are designed for overnight occupancy, and which are berthed in approved moorage areas on Shasta Lake. Establish and enforce standards of sanitation and appearance for these vessels. The number shall be limited to the number of such vessels now on the lake."

"Prohibit residential occupancy on the lake surface for continuous and/or intermittent periods in excess of 30 days per season."

"Present average daily use of 330 houseboats will be allowed to expand to an average daily use of 450 boats...."

"...an indicated total capacity was calculated to be 780 houseboats -- if this activity were maximized without consideration for any other activity on the lake."

Decision

It is my decision to continue to manage within the 1976 planned capacity. This would allow total overnight use by all types of boats (not just houseboats) to increase to 780. Within the 780 limit, houseboating would be allowed to increase to 450 average daily use.

Overnight use would be managed to not exceed 780 boats per night. This would include all overnight vessels, including houseboats, and boat-in shoreline camps. When recreation use reaches planned capacities, a procedure for control of the overnight boating use will be implemented.

Since this analysis is within the scope of the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

EIS - p. 51, Lake Surface Overnight Occupancy

EIS - p. 70-72, Houseboating

EIS - p. 88, Section II, Item 2, Houseboating

NRA Plan - p. 28, 2nd paragraph, Management Direction

NRA Plan - p. 31-32, Section 4, Item B&C, Lake Surface Overnight Occupancy Control

Forest Supervisor's Order #14-58-2, July 20, 1978

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA LAKE

SUB-ISSUE 2A: THE PROPORTION OF COMMERCIAL TO PRIVATE HOUSEBOATS USING SHASTA LAKE

Present Situation

The 1976 Land Use Plan and E.I.S. for the National Recreation Area recognized a maximum number of houseboats that could be in use on an average day and still maintain a quality recreation experience. To keep within this maximum, a limit was set on private and rental houseboat numbers. The maximum number of houseboats authorized in the plan has been allocated; therefore, no additional houseboats were available under the existing plan. There is, however, a large demand for both private and commercial houseboats on the lake.

Public input to the 1981 plan revision included maintaining the present numbers, increasing numbers, decreasing numbers, and changing the mix of private and commercial houseboats.

Houseboating is a unique and very popular activity on Shasta Lake. The lake's irregular shoreline, vegetation, warm water in summer, variety of sport fisheries, and associated recreation water activities are all attributes which make houseboating popular. Houseboating is most popular in the summer months between May and September, however, it occurs on Shasta Lake year round.

Present average daily houseboat use on Shasta Lake is 400. Approximately 15% of the private fleet and 85% of the commercial fleet are in use at any one time on the lake during the primary recreation season.

There is a waiting list of over 350 people who want a private houseboat permit. There is an even greater number of people who want to rent a commercial houseboat each year but are unable to find an available rental. Typically, all commercial houseboats are booked for rental prior to May each year. Resort/marinas have requested additional houseboat allocations.

Private houseboats represent an exclusive use of Shasta Lake, while commercial houseboats are available to the general public. Presently, 45% of the houseboats are allocated to the commercial fleet and 55% to the private fleet. "Off season" houseboating opportunities are abundant.

Plan Management Direction

The 1976 NRA Land Use Plan placed the following limits on houseboats and/or overnight occupancy boats.

- "Permit expansion of existing commercial houseboat fleet to 380 vessels, under existing or renewed special use permits."

  After the 1976 NRA plan was approved, commercial houseboats were allocated to resorts, based on the number identified in their special use permit. Resorts with permits which did not specify numbers of houseboats were allocated the number of boats they had at the beginning of the NRA planning process.

- "Institute a permit system for all private houseboats which are designed for overnight occupancy and which are berthed in approved moorage areas on Shasta Lake. The number of permits will be limited to the number of such vessels now on the lake."

  The intent and purpose of the plan was to keep houseboat use well within the capacity of the coves and lakeshore to accommodate houseboats overnight and still maintain a quality recreation experience for all lake users.

  The E.I.S. and plan set a capacity of 450 houseboats in average daily use on the lake surface and in coves. Actual boat count data from the 1981 boating season show that average daily houseboat use on Shasta Lake is 400 boats.

Decision

It is my decision to increase the commercial houseboat limit and do not increase private houseboats. This would allow total houseboat use to reach the projected 450 average daily houseboat use on Shasta Lake. This will mean an increase of 53 (1) rental houseboats to be allocated to existing resort marinas selected by the Forest Supervisor on the merit of individual resort marina proposals. The private houseboat fleet during the next 5 year plan period will not be increased over the current level. This alternative will increase availability of houseboating to the general public and will protect the private houseboat owner's investment.

Since this analysis is within the scope of the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to following for additional information on current direction and effects analysis:

EIS - p. 72, Houseboating

EIS - p. 88, Section II, Item 2

NRA Plan - p. 31-32, Lake Surface Overnight Occupancy Control Items B&C

(1) The number of additional commercial houseboats is determined as follows:

a)	Capacity for average daily use of houseboats	= 450
b)	Less private houseboat fleet (476) utilized 15% of the time available during the primary use season. (476 x .15)	= - 71
c)	Unadjusted number of houseboats available to rental fleet	= 379
d)	Rental fleet is used 85% of the time available during the primary use season. (379 ÷ .85)	= 446
e)	Less existing rental fleet	= -393
f)	Additional houseboats available for the rental fleet (utilization rates of private and commercial fleets is expected to stay with the average daily use limits of 450 houseboats)	= 53

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA LAKE

SUB-ISSUE 2B: THE REGULATION OF OVERNIGHT BOATS INCLUDING CABIN CRUISERS USING SHASTA LAKE

Present Situation

Overnight boats include a wide variety of vessels equipped with overnight accommodations, either permanent or portable. These boats include large runabouts, cruisers, and patio boats but do not meet the definition of a houseboat. Public input to the 1981 plan revision identified the number and regulation of overnight boats on the lake, lack of enforcement of sanitation standards, and wakes created by cruisers as issues which needed to be reviewed.

The number and use of overnight boats on Shasta Lake has increased significantly since the 1976 Land Use Plan. This is probably a result of limiting the number of houseboats but not limiting the number of overnight occupancy boats. People who can not get a houseboat permit purchase and use an overnight boat and attain a similar recreation experience on Shasta Lake. There are presently over 200 overnight boats moored year around on Shasta Lake, ranging from 18 feet to 48 feet in length.

While the 1976 Land Use Plan allows the Forest Service to limit the number of overnight boats, the agency has elected to limit only what is defined as a houseboat. With the rapid increase in number of overnight boats, the overnight use of Shasta Lake is increasing.

There are several additional concerns associated with overnight boats. One is sanitation, and the other is the size of the wake caused by the large cruisers' displacement or deep "V" type hull design. At present, permanently installed sanitation facilities (toilets) on overnight boats are not inspected to insure that they cannot dump septage directly into the lake. Wake size is not controlled on the lake, except indirectly through speed restrictions such as 5 mph zones which are applicable to all boats.

Plan Management Direction

The following direction was established in the 1976 Land Use Plan:

> "Institute a permit system for all private boats which are designed for overnight occupancy, and which are berthed in approved moorage areas on Shasta Lake. Establish and enforce standards of sanitation and appearance for these vessels."
>
> "The number of permits will be limited to the number of such vessels now on the lake."

As stated above, only houseboats were included in the permit system during the last 5 year plan period.

Decision

It is my decision to continue with the plan as is. Once overnight capacity is reached (780 overnight boats in use at one time), controls on boat numbers will be implemented. The present plan already gives guidelines to inspect and regulate sanitation devices on all overnight boats. Regulating wake size is impracticable to enforce. Present State boating law makes the boat operator responsible for damage to persons or property from the wake created by his/her boat. Education and peer pressure have worked best in other boating areas to control wake size.

Since this analysis is within the scope of the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effect analysis:

NRA Plan - p. 28, 2nd paragraph, Management Direction

NRA Plan - p. 30, General Water Management and Zoning, 3rd paragraph, 6th paragraph

NRA Plan - p. 31-32, Lake Surface Overnight Occupancy Control

EIS - p. 45, 2nd paragraph, Management Direction

EIS - p. 50-51, Lake Surface Overnight Occupancy Control

EIS - p. 80, Water Quality - Mitigation Measures

EIS - p. 71, 1st paragraph

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA LAKE

SUB-ISSUE 2C: PRIVATE HOUSEBOAT PERMIT SYSTEM USING SHASTA LAKE

Present Situation

As a result of the 1976 Land Use Plan, a private houseboat permit system was initiated for the purpose of controlling the numbers of private houseboats and establishing and enforcing standards of sanitation and appearance for these vessels. Public input to the 1981 plan revision included methods of changing the permit system, ways to eliminate the permit system while maintaining controls, and additional controls to the existing permit system.

All houseboats moored on Shasta Lake as of April 1, 1977, were issued a permit which resulted in 476 private houseboat permits. No permit system was initiated for house-boats placed on the lake for less than 30 days each calendar year.

The permit system has worked well for controlling the number of houseboats on Shasta Lake, although there have been minor violations. When the permit system began, an intensive inspection program was initiated which covered sanitation, conformance to state and Coast Guard regulations, appearance and integrity of the vessel, compliance to safety and code requirements, etc. Inspections were timely and costly. The intent of the program was to control numbers and enforce standards of sanitation (water quality) and appearance.

Normally, houseboats can be found for sale at any time since there is a fairly high turnover rate in ownership. Under the existing permit system, permits have been automatically transferred from one owner to the next. No fee has been charged for the permit or the transfer. While the permit has no value in itself, it has accrued a value because the numbers have been limited and the demand remains high.

After the private permits were issued, a few permits reverted to the Forest Service for various reasons. A drawing was used to establish a priority list of names for the available permits and any additional permits which might become available in the future. In addition, a waiting list has been maintained for all individuals interested in a private houseboat permit, should another drawing be held. Presently, there are over 350 people on the waiting list.

The Forest Service may terminate a private permit for the following reasons: To protect public health, safety, and welfare; and to enhance and protect the lake environment and the recreation opportunities provided. These terminations could take place at the time of sale or by drawing. Several permits have been terminated for non-compliance with permit terms.

There is a long list of people waiting to get a private houseboat permit. If conditions remain unchanged, there will be little or no opportunity for them to obtain one unless they pay a premium and purchase an existing houseboat.

Private houseboat owners have a large investment in their houseboats and permits. Permit cancellation could cause them to lose their investment.

Limiting the numbers of houseboats and automatically transferring the permits upon sale increases the resale value of the houseboat. In reality, private houseboat owners are selling a permit (which was originally free) by adding $5,000 to $10,000 to the selling price of a houseboat with a permit.

Plan Management Direction and Environmental Statement Parameters

Direction contained in the 1976 plan states:

"Institute a permit system for all private boats which are designed for overnight occupancy, and which are berthed in approved moorage areas on Shasta Lake. Establish and enforce standards of sanitation and appearance for these vessels. The number of permits will be limited to the number of such vessels now on the lake."

Prohibit residential occupancy of the lake surface for continuous and/or intermittent periods in excess of 30 days per season without a permit.

The Environmental Impact Statement for the plan under "Environmental Effects of the Plan" states, "in houseboating, however, it is both feasible and - without question - necessary to control the total number of vessels used for this purpose which are permanently berthed on the lakes. Normally, there are very few houseboats which are brought to the lakes and launched for vacation periods and removed at the end of that period. No control over these boats is planned at this time, but controls may be invoked if numbers begin to exceed the present nominal amount."

Decision

It is my decision to continue with the current management direction.

Since this analysis represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

Forest Supervisor's Order #14-58-2, July 20, 1978, Shasta Lake Private Houseboat Permit Program

NRA Plan - p. 31-32, Lake Surface Overnight Occupancy, Item 6

NRA Plan - p. 30, 6th paragraph, General Water Management and Zoning

EIS - p. 71, 1st paragraph

ISSUE NO. 2: THE TOTAL AMOUNT OF OVERNIGHT BOATS USING SHASTA LAKE

SUB-ISSUE 2D: SIZE OF BOATS

Present Situation

The 1976 Land Use Plan established a maximum length and width for boats on Shasta Lake and Claire Engle Lake. Public input to the 1981 plan revision ranged from abolishing size limits to reducing size limits.

The private houseboat permit system and the commercial houseboats under permit were allowed maximum size of 15' wide and 50' long. No restriction was placed on boat height.

Over the past 5 years the average houseboat size has increased to the maximum size limits. Small houseboats have either been sold off the lake or junked and the permit transferred to a larger boat.

Presently the maximum width boat which can be transported on Interstate 5 is 15 feet wide with a permit issued from the local Cal Trans office in Redding. Boats wider than 15 feet must have a special permit issued from the Cal Trans office in Sacramento. Permits for boats wider than 15 feet have generally been refused.

Boats with lengths to 135 feet may be transported on Interstate 5 and Shasta County road systems, depending on the capability of the road and within weight guidelines.

Boat height for transportation is governed by clearances under utility lines, bridges, and overpasses.

There has been one official request for a larger private houseboat. Most people are satisfied with the existing limits.

While boat lengths in excess of 50 feet can easily be transported to and from Shasta Lake, length has a direct relationship to maneuverability of the boat on the water. There is no licensing or age requirement for operating large houseboats. Rental and private boats are often operated by inexperienced and intoxicated operators. Some operators have never driven a boat, and many boat operators have never driven a boat the size and weight of a houseboat. Increasing the length and width will create an even greater risk to the boat and objects in the path of the boat. In addition, recreationists like to seek seclusion by taking their boats into narrow coves and inlets, some of which have dead trees or other objects to negotiate. Increased lengths and width will reduce the maneuverability of the boat to get into or turn around in many of these coves, thus restricting access to many desirable mooring spots. Boats are regularly beached overnight. Lake drawdowns are more frequent--thus increasing the risk of large, heavy boats becoming stranded.

A 15 foot by 50 foot boat has the capacity of 12 people living on the boat at one time which appears to be adequate.

Most marinas are designed and constructed to accommodate a 50' x 15' boat. Larger boats would, in some cases, require modification of marina facilities to accommodate them.

Plan Management Direction

Direction contained in the 1976 plan states: "Set a maximum length of 50 feet and a maximum width of 14 feet for any boat on Shasta Lake, except for special uses under permit."

Current management direction allows boats 15 feet wide and 50 feet long which are under permit.

Decision

It is my decision to maintain the present limitation of 50 feet for boat length, increase the limitation from 14 feet to 15 feet for boat width, and include a height limit which will insure transportability to and from Shasta Lake.

It will also allow the approval of larger boats for special purposes to meet the needs of the general public and lake management, within the guidelines of the overall management plan.

Since the analysis represents little change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

NRA Plan - p. 30, 5th paragraph, General Water Management and Zoning

Shasta Lake Private Houseboat Permit Program

ISSUE NO. 3: DISPERSING AND/OR LIMITING THE NUMBER OF BOATS USING THE NATIONAL RECREATION AREA

Present Situation

The 1976 Environmental Statement and NRA Plan allowed average daily use of all boats to increase to an estimated level of 2,000, during the basic recreation season. Public input in the 1981 review of this plan identified dispersing and/or limiting the total number of boats as two issues which were in need of reassessment.

Power boating use has increased from an average daily use in 1976 of 700 to average daily use of 1,050 boats in 1981. For purpose of this planning effort average daily use refers to the number of boats on the lake at any one time averaged over the primary recreation use season.

The 1976 Land Use Plan designated boating restrictions on certain areas of Shasta Lake. These restrictions included 5 mph areas, no skiing areas, and no houseboating areas. Areas of the lake with no such designations have no restrictions except those imposed on all inland waters under state boating laws. Public input to the 1981 plan revision varied from elimination of zoning to increased zoning.

A variety of water-oriented recreation activities occur within the NRA. However, not all uses are compatible. Conflicts arise because of speed, noise, boat size, and type of use. These conflicts tend to lower the quality of recreation experience for others.

Some 5 mph designations were used to protect developed sites and meet requirements of state boating law, however, most were designated to protect favorite fishing coves and inlets to maintain a favorable fishing environment. Most of the 5 mph designations have been buoyed, covered by county ordinances, and enforced by the County Sheriff. There is no speed restriction other than the 5 mph designation on Shasta Lake.

The "no water skiing" and "no houseboating" areas have not been implemented on the lake or covered by county ordinances. There has been no controversy over the lack of implementation of the "no houseboating" areas, as designated in the plan; however, there has been controversy over two of the "no skiing" areas which have not been implemented. These two areas are the Upper Pit and Salt Creek "no skiing" areas. On the Upper Pit the user conflict is occurring between the skiers and fishermen, and at Salt Creek a conflict is occurring between water skiers and other users of this narrow inlet. Serious accidents have occurred in both areas.

Some people feel that all restrictions in the plan should be implemented, while others feel that no additional restrictions are needed, or possibly prefer the elimination of all restrictions. A segment of the recreation users feels that user conflict is presently occurring in several areas of the lake, and the 1976 plan restrictions should be implemented to take care of this conflict.

There is growing concern over the lack of a maximum speed limit on Shasta Lake as in most other California lakes. As use increases and more boats are on the

lake surface, the potential for user conflict and accidents increases with boat speed.

Plan Management Direction

The 1976 Environmental Statement and NRA Plan direction was to manage for powerboating to increase from 700 powerboats per day to and estimated 2,000 per day (in-season average).

The 1976 plan designated the following restrictions on Shasta Lake.

Recommend the following amendments to the County boating ordinance.

1) 5 m.p.h. zones as designated on map

2) Prohibited water skiing in the following areas:

   - Squaw Creek Arm above a point approximately at Winston Gulch
   - McCloud Arm above Moore Creek
   - Sacramento Arm above Antlers Resort
   - Salt Creek Inlet from Homeowner's Tract east
   - O'Brien Inlet from east of Skipper's Cove eastward to 5 m.p.h. zone

3) Close off certain narrow inlets of the main arms off the lake to houseboats from May 15 to Sept. 15 annually as follows:

   - On the McCloud Arm, the area beyond Pine Point
   - On the Squaw Arm, the area beyond Didallis Creek Tract
   - On the Pit Arm, the area beyond Stein Creek

Decision

It is my decision to continue with current management direction. This would allow boating[1/] use to increase from the existing 1,050 to 2,000 boats on an average daily basis. When recreation use reaches planned capacities, a procedure for control of the boating use will be implemented.

User conflict is not expected to increase above current levels, with the possible exception of peak holiday weekends. This decision provides for moderate increases for the opportunity for all boating use of the lake and still maintains near the quality of experience now existing on the lake. Only minimal increases are expected on impacts to the environment in the way of shoreline erosion and pollution.

Existing plan zoning restrictions will be maintained, but will allow implementation when needed to control user conflict or safety. Under this decision, I am directing the Unit District Ranger to work with the county to implement the "no skiing" designations in the Upper Pit and Salt Creek areas before the 1982 primary recreation season to mitigate an existing conflict between skiers and other users of the lake and surrounding environment.

[1/] Note reference to "power boating" has been changed to "boating" to recognize the small but significant use of nonpower boats (sail and canoe).

In addition, it is my decision to work with the county to implement Alternative I, which will place a maximum speed limit on Shasta Lake. An area for unlimited boat speed will be established in the southwest portion of the lake in the vicinity of Shasta Dam where boat densities are low and lake surface is large.

Since this represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

NRA Plan - p. 28, Management Direction, 1st paragraph and 5th paragraph

NRA Plan - p. 30, General Water Management Zoning, 8th paragraph

NRA Plan - p. 31, Lake Surface Overnight Occupancy Control (Item a)

EIS - p. 45, Management Direction, 1st paragraph and 5th paragraph

EIS - p. 48-49, Zoning - bottom of page 48 and top of page 49

EIS - p. 50, Lake Surface Overnight Occupancy Control (Closures)

EIS - p. 80, Mitigation Measures, Items 2&3

ISSUE #4 - ADDITIONAL AND/OR EXPANDED COMMERCIAL SERVICES IN THE SHASTA LAKE UNIT OF THE NRA

Present Situation

Resort/marina permittees want to expand their facilities and offer additional services such as night clubs, restaurants, restaurants on islands, dry boat storage, paddle boats, dining and entertainment boats, overnight lodging, float planes, and ski and sailing schools.

Requests have also been made by private parties to develop new resorts and set up floating food and drink services. A proposal has been made to provide floating camper platforms which would enable self-contained RV's to become temporary houseboats. The anticipated rental rates would be significantly lower than current houseboat rental rates.

Some NRA users have recommended that no additional services be provided. They feel that present services are adequate -- more services would degrade the environment or lead to crowding. On the other hand, others have indicated that additional services would be good for the economy.

Plan Management Direction

The existing NRA plan identifies specific commercial service guidelines by unit:

Shasta Unit

- Permit expansion of commercial moorage not to exceed 2,800 slips. Public needs should be reflected in development plans and schedules.

- Encourage the private development of dry land boat storage where feasible.

- Allow expansion of existing resorts, marinas, or combinations of these public use facilities under the following guidelines:

  a. Existing or new facilities must further the recreation potenial of the lake and its environs. These facilities should be within use capacity as projected by the entire plan.

  b. All expansion must be integrated with and utilize the surrounding environment in its natural to the greatest extent possible with minimal disturbance.

  c. The facilities proposed must fulfill a then-existing need by the public and utilize the natural resources for short term recreation (periods of 30 days or less).

In addition to the above, county zoning standards have been developed to control private land development.

Decision

It is my decision to continue with current plan direction which allows rehabilitation of existing facilities and moderate expansion. This alternative will allow for a controlled expansion of the commercial services to the capabilities of the resources.

It will allow for rehabilitation of outmoded facilities and moderate expansion into activities which will compliment the water oriented recreation. This alternative will sustain a rural recreation experience within and adjacent to existing resorts. Roaded Natural, Semi Primitive Motorized, and Semi Primitive Non-Motorized recreation opportunities will be provided as indicated in Exhibit 1.

Commercial services at the existing resorts will be allowed to expand, furthering the recreation potential of the lake, but staying within the total use and environmental controls projected by the plan.

All expansion must be integrated with and utilize the surrounding environment in its natural state. Carnival type activities will not be permitted. Uses on the land surface surrounding the lake must serve to complement the outdoor water and forest oriented recreation activities rather than being an end in itself.

Resorts which maintain a marina in shallow water ports should relocate in order to provide a viable economic entity and consistent good public service. A plan will be developed for low water operations, showing areas resorts can relocate for short periods of time. Relocation will be based on user convenience and safety. All relocations, rehabilitation and expansion will be accomplished only through an approved Site Development Plan and appropriate analysis based on the National Environmental Policy Act.

Examples of Uses

Typical Acceptable Uses	Typical Not Acceptable Uses
Boating	Bar with no Restaurant
Minimum supply stores	Carnival type uses
Minimum warehousing and shop	Dining and Entertainment boats
Minimum employee housing	Floating and moving concessionare boats
	Resorts with emphasis on restaurant and nightclub operation to serve local communities rather than to serve water oriented outdoor recreation

Since this analysis is within the scope of the existing legislative act and the Final Environmental Statement (FES), completed in 1976, a categorical exclusion is appropriate. Refer to the following for additional information on current direction and effects analysis:

NRA Plan - p. 31, Water Use Facilities

NRA Plan - p. 34, Public Recreation Facilities and use 5th and 7th paragraphs

EIS - p. 50, Water Use Facilities

EIS - p. 55, Public Recreation Facilities, 5th and 7th paragraphs

EIS - p. 67, Recreation Item 1

EIS - p. 90, Section III Item 1

EIS - p. 91, Section III Item 5

County Zoning Ordinances 4333 NRA-S District

ISSUE NO. 5: VEHICLE CAMPING ON SHASTA LAKE SHORELINE

Present Situation

The 1976 Land Use Plan allowed for continued vehicle access camping along the shoreline of Shasta Lake until suitable alternative facilities become available. Since the plan, no additional facilities have been constructed and dispersed vehicle camping remains very popular.

Public input to the 1981 plan revision identified a range of recommendations, from continuing the activity to eliminating the activity, as well as suggestions for management if it was continued.

Shasta Lake is one of the few large lakes in California where camping has been permitted along the shoreline. As the lake level drops, camping takes place between the lake and high water line wherever vehicle access is available.

As a result of the widespread popularity of shoreline camping, however, more and more environmental damage is occurring. For instance, soil erosion is on the increase. Potential health and safety problems exist because shoreline camping is concentrated in places where there are no sanitation facilities. Law enforcement problems are mounting, since undeveloped campsites are not patrolled regularly.

In addition, some of the more heavily used shoreline camping areas are within sight of major scenic viewing areas, and the Forest Service has received complaints about the hodgepodge of unsightly camps and vehicles.

Law enforcement is sometimes a problem in these dispersed sites. Large groups tend to congregate and often have little regard for the surrounding users.

This type of camping has resulted largely because people like to be near the water, and it is free.

Plan Management Direction

The following direction was established in the 1976 Land Use Plan:

"Effect controls on all dispersed camping to bring resource damage within acceptable limits through an education program and administrative regulation. Continue dispersed auto access camping within 1/4 mile of lake shore only until suitable alternative facilties become available."

"Close areas to dispersed camping as necessary adjacent and contiguous to existing campgrounds, resorts, marinas, private land developments, or where such use conflicts with wildlife or other resources. Establish camping stay limits as appropriate."

An existing Forest Supervisor's order restricts the length of stay for dispersed camping to 30 days.

Decision

It is my decision to continue with current direction. The areas currently used for dispersed shoreline camping will be reassessed to determine their suitability problems and the feasibility to correct existing serious deficiencies by providing limited sanitation facilities, garbage pickup, law enforcement, and recreation fee. If deficiencies cannot be mitigated, the areas will be closed for this use.

Since this represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

NRA Plan - p. 34-35, Public Recreation Facilities and Use

EIS - p. 80, Mitigation Measures, Item 6

EIS - p. 89, Item II,B,2

EIS - p. 93, Item XII,3,5

SHASTA UNIT

ISSUE NO. 6: SANITATION/POLLUTION/WATER QUALITY
ISSUE NO. 7: SAFETY/PUBLIC SAFETY
ISSUE NO. 8: LAW ENFORCEMENT

Present Situation

Issues expressed by the public concerning sanitation and safety are heavily dependent on the issue of law enforcement. They all tend to be interrelated. There appear to be sufficient regulations to cover sanitation and safety, however, enforcement of those regulations is necessary. Sub-issues under these general headings included methods of accomplishment, better controls, methods to reduce cost, and ways to better inform the public.

Sanitation/Pollution/Water Quality

Noise Pollution

There are many boats on the lake, some dry stack and some wet stack, which exceed the legal decibel noise limit. Forest Service employees receive many complaints, especially about loud power boats. There are other sources of noise pollution, however, none are as dominant as noise from power boats. The responsibility for enforcement lies with the County Sheriff's Department.

Water Pollution

Based on complaints from the general public, there is an increasing amount of water pollution. Increased costs of pumping boat septic holding tanks and uninspected boat holding systems are probably contributing factors. Another contributing factor is the fact that there is no convenient place to dump porta-potties around the lake. Even with the increased reports of water pollution, the overall water quality of Shasta Lake remains good to excellent.

Litter and Garbage

Litter and garbage continue to be an unnecessary nuisance within the NRA. It does not appear to be increasing from year to year; however, the litter and garbage problem does exist.

Law Enforcement

There is a definite increase in law enforcement needs. During the last few years, and 1981 in particular, there has been an increase in vandalism, theft, and rowdy parties in campgrounds.

Based on the complaints received by the Forest Service from the boat users, drinking and just plain disregard for laws, regulations, and the enjoyment of others seems to be an increasing problem. While law enforcement needs are increasing, the budgets of the two agencies, Forest Service and County Sheriff, are shrinking.

The Forest Service provides funds to the Sheriff's Department for increased patrols of land-based facilities, however, these funds have been cut and fewer patrols are predicted for the future.

Public Safety

Public Safety is an issue that many people feel strongly about and several topics have been included within this category. General boating safety, medical aid and rescue, lake hazards, too many boats, and motorcycles are the things most of the people are concerned with. Some areas are related to enforcement of existing laws, while others are not.

The Forest Service has a program to mark boating hazards. The major problem, however, is that it is not possible to mark all hazards with the fluctuating lake level. In addition, funds for marking hazards are decreasing to the point that it is difficult to maintain the existing hazards, much less install new markers. Each year there are incidents of boaters hitting unmarked hazards and causing boat damage and, in some cases, personal injury. The lower the lake level, the higher the risk of hitting a submerged unmarked hazard.

In the past several years the Forest Service lake patrol has been cut back, therefore, they provide less service to the public.

Resorts and marinas are inspected on a regular basis to insure conformance to known safety codes.

Most debris washed into the lake by the tributary drainages is removed from the lake to protect boater safety. Forest Service and resort water systems are tested to county standards to insure safe domestic water.

Plan Management Direction

The 1976 plan contains the following direction:

- Mark all navigational hazards. These include log booms used as breakwaters and overhead cable used for mooring.

- Continue lake sweeping operations and, if feasible, capture debris at entry points to the lake.

- Construct floating sanitation units as needed for the boating public, including provisions for portable-toilet waste disposal.

- Recommend a county ordinance requiring inspection of all vessels equipped with sanitation devices. All such vessels will be inspected on a regular basis by the Forest Service or the COunty Sheriff's Lake Patrol.

- Recommend a county ordinance which requires installation of approved sanitation devices on all boats designed for overnight occupancy.

- Dispersed camping controls will be implemented in two steps as necessary:

1. Begin with a strong education program to gain voluntary compliance with fire, sanitation, solid waste disposal and site protection measures.

2. If the education program fails, institute permit system with adequate patrol and law enforcement activities to gain compliance.

- In addition, there are Federal, State and local laws that regulate many of the items that were addressed.

- There are State and local laws that place limits on noise.

- The dumping of waste into waterways is addressed by State and local laws.

- Federal regulations prohibit pollution, littering, and disposal of garbage.

Decision

It is my decision to continue the current management direction contained in the 1976 Land Use Plan for the National Recreation Area. Special emphasis will be placed on the following:

1. Increase the number of floating toilets to the number specified by the Operation and Development Plan as funding becomes available.

2. Increase the availability of recreational vehicle dump stations.

3. Increase use of volunteers, such as individuals, Coast Guard Auxiliary, Chamber of Commerce, and clubs, and initiate community projects.

4. Increase enforcement of speed and noise limits on the lake.

5. Emphasize information and management at key NRA entry points and portals.

6. Strengthen the hazard marking program and modify the wording in the plan. The agency cannot continue to try to mark all hazards as stated in the plan; however, it should concentrate on the marking of those land form hazards which it feels are serious threats to the boating public in main channels and major use areas, and publish and distribute hazard charts for users showing all hazards, including trees. The hazards of trees left standing in the lake are impossible to mark with existing manpower and budget limitations and will, therefore, not be marked. The boating public must assume some responsibility for their own safety. Emphasis should be placed on better informing the public of possible unmarked hazards.

Since this represents no change from the Final Environmental Statement (FES), completed in 1976, for the Whiskeytown-Shasta-Trinity National Recreation Area, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

NRA Plan - p. 30, General Water Management and Zoning

NRA Plan - p. 34-35, Public Recreation Facilities and Use

NRA Plan - p. 31, Powerboating

NRA Plan - P. 31-32, Lake Surface Overnight Occupancy Control

EIS - p. 66-67, Air Quality

EIS - p. 67, Noise

EIS - p. 75-81, Water Quality

EIS - p. 88, Item II,A,1

EIS - p. 89, Item II,B,2

EIS - p. 93, Item XII,3

EIS - p. 94, Item XII,4

SHASTA UNIT

ISSUE NO. 9 - FOREST SERVICE RECREATION FACILITIES AND MANAGEMENT

Public concerns as they relate to this issue are divided into six sub-issues for the sake of clarity: Campgrounds, Boat Ramps, Swimming Areas, Handicapped Facilities, Sanitation, Trash, Restroom Facilities, and Wildlife.

Subject matter in this section pertains to land-based recreation, as opposed to water-oriented recreation. It also addresses facilities and services that may fall under the Forest Service's authority to do something about.

SUB-ISSUE A - CAMPGROUNDS

Present Situation

Some people have indicated there is a need for more campgrounds to disperse use. Others expressed a need to keep campgrounds or parts of campgrounds open all year. Keeping certain campgrounds open during hunting season is particularly important. Attention has been focused on the general condition of sites and facilities and the need for more maintenance.

Some people expressed a need to keep campgrounds open all year. Others expressed concern about the condition of developed sites and facilities.

Most campgrounds are closed during the off-season to stay within operating budgets. Sufficient number of campgrounds remain open to adequately meet off season needs. Sites and facilities are rehabilitated on a priority basis as funds permit.

Plan Management Direction

Attempt to meet the average summer weekend camping needs. Provide 300 additional campground spaces on public land for auto and boat access during the plan period. Encourage private land development of facilities which would include cabins and trailer parks.

Close areas to dispersed camping, as necessary, adjacent and contiguous to existing campgrounds or where such use conflicts with wildlife or other resources. Establish camping stay limits as appropriate.

Decision

Since campground spaces are available, except on peak holiday weekends around Shasta Lake, it is my decision to maintain the current management direction in the NRA Operation and Development Plan. As funds become available, existing facilities will have first priority for rehabilitation and expansion. After existing facilities in key recreation use areas have been rehabilitated, new construction will be initiated as use requires and funding permits. The majority of campgrounds will continue to be closed in the off-season in order to stay within current operating budgets. Advance information on camp site availability will be provided at North and South Arrival Stations as funding permits. In selected campgrounds standards will be reduced for cleaning, operation and maintenance to finance longer open season.

Any decision will be documented with appropriate analysis based on the National Environmental Policy Act.

SUB-ISSUE B - BOAT RAMPS

Present Situation

Concern has been expressed about the need to extend ramps during low water levels. The need for more courtesy docks was mentioned as well. Concern has been expressed over small boat accessibility to the Pit River Arm of Shasta Lake.

Plan Management Direction

Plan no additional launch facilities. Improve existing facilities and extend ramps to 980 feet. Improve the Baily Cove Boat Ramp. No additional facilities will be constructed for day use except boat launching and mooring facilities necessary to meet planned use.

Decision

It is my decision to maintain current management direction. At present, parking and ramp capacity is adequate to handle existing use during low water levels -- though available low water ramps may require a recreationist to launch from a ramp other than their favorite. Five ramps were extended on Shasta Lake during the drought to accommodate 150 feet drawdown. Recreation use and ramp/parking facilities will continue to be monitored. Additional boat ramp facilities will be provided depending on increased recreation use levels and planned lake capacities. A ramp for small boats in the upper Pit River Arm of Shasta Lake will be explored.

SUB-ISSUE C - SWIMMING AREAS

Present Situation

Some users have indicated a need for special swimming areas, particularly on Shasta Lake. Suggestions include designated areas, such as coves, for swimming only.

Plan Management Direction

No developed swimming sites are planned for construction on Shasta Lake.

Decision

It is my decision to encourage permittee development of floating swimming pools. Construct land and water access swimming areas as funding levels permit.

SUB-ISSUE D - HANDICAPPED FACILITIES

Present Situation

The need for handicapped access facilities has been brought to the Forest Services' attention.

Plan Management Direction

The existing management plan calls for modification of up to 30 percent of existing facilities to meet the needs of the handicapped users.

Decision

It is my decision to implement current Forest Service Manual direction to eliminate architectural barriers which prevent the use or enjoyment of recreation attractions. New and rehabilitated sites which are accessible by road should be designed to adequately service physically handicapped participants. These parking areas, toilet facilities, camp and picnic units, and circulation patterns must be designed to reflect the needs and number of anticipated handicapped users.

SUB-ISSUE E - SANITATION

Present Situation

Public comments have reflected a need for more public restrooms and dump stations, as well as increased trash collections.

Plan Management Direction

Construct floating sanitation units as needed. Provide public restrooms in recreation areas and insure adequate trash collection.

Decision

It is my decision to continue current management direction. Floating toilets will be constructed as needed. Public restrooms will be provided in all recreation areas including popular dispersed camping areas. Insure adequate trash collection both on and off the lake. Provide dump stations in centralized areas which serve a number of major use areas.

SUB-ISSUE F - WILDLIFE

Present Situation

The conflicts between recreationists and wildlife has been brought to the Forest Service's attention. However, early in the planning process, it was decided that all wildlife concerns would be addressed in the Forest Land Management Planning process to eliminate duplicate efforts.

Plan Management Direction

The existing NRA plan gives extensive direction for the maintenance of fisheries and wildlife habitat. It also provides direction of rare and endangered plants and animals. A warm water fish habitat plan is being finalized which addresses part of this problem. Territory management plans have been developed and partially implemented for all eagle nesting sites.

Decision

It is my decision to continue present management direction and program outlined in the Forest Land Management Plan.

Since the analysis on sub-issues of this general issue represent either no change or very little change from the Final Environmental Statement (FES), completed in 1976, a categorical exclusion is appropriate. Refer to the following for additional information on current management direction and effects analysis:

Campgrounds

NRA Plan - p. 28-29, Management Direction

NRA Plan - p. 34-35, Public Recreation Facilities and Use

EIS - p. 89, Item II,B,1

Boat Ramps

NRA Plan - p. 31, Water Use Facilities

EIS - p. 91, Item III,6

Swimming Areas

NRA Plan, p. 32, Swimming

EIS, p. 91, Item III,8

Handicapped Facilities

NRA Plan - p. 28, Management Direction

Sanitation

NRA Plan - p. 30, General Water Management Zoning

NRA Plan - p. 35, Public Recreation Facilities and Use

EIS - p. 80, Mitigation Measures

Wildlife

NRA Plan - p. 29, Management Direction

NRA Plan - p. 35, Wildlife

EIS - p. 82, Wildlife

NRA Plan - p. 32, Fishing

EIS - p. 88, Item II,A,3

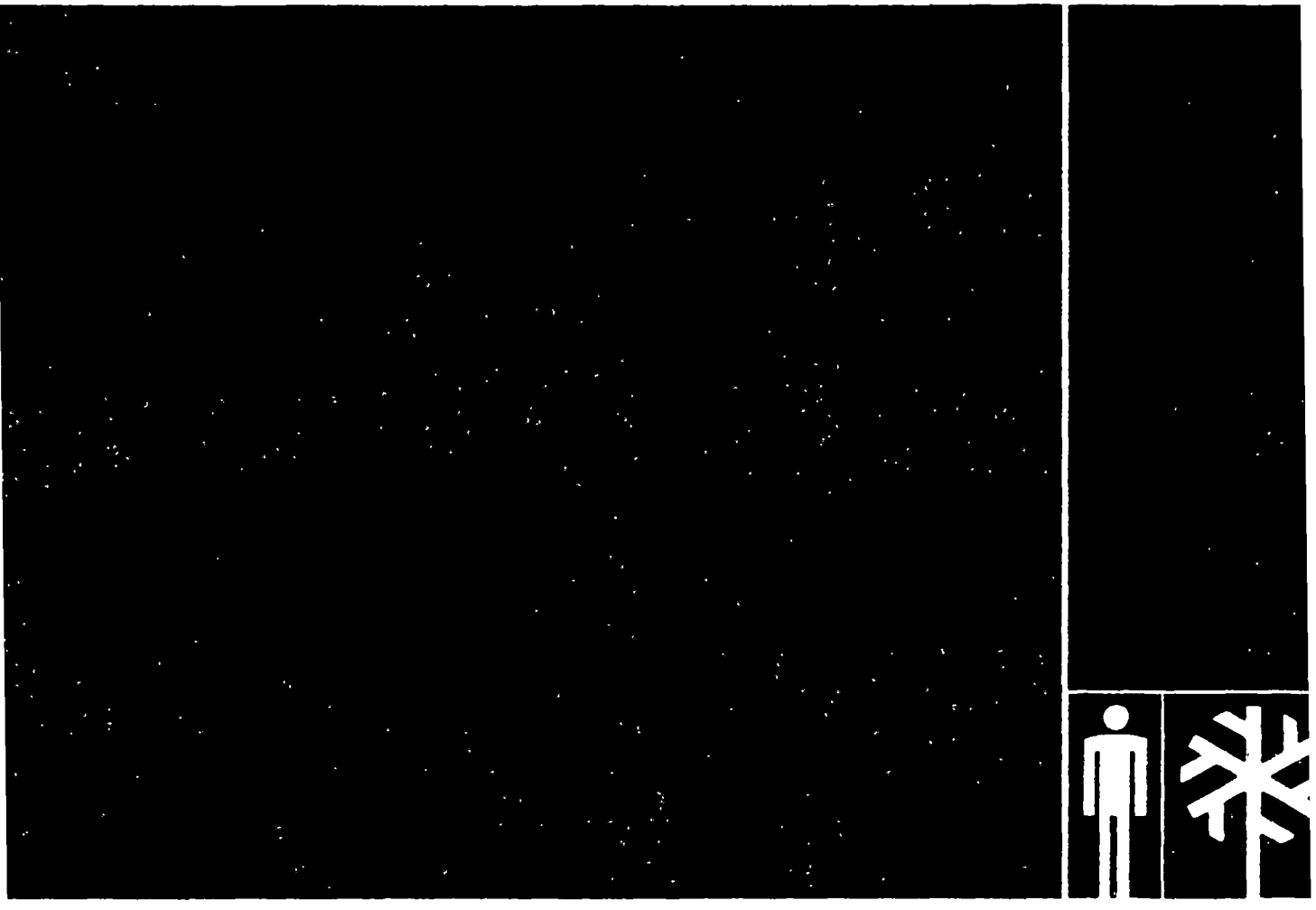
EIS - p. 90, Item II,B,6

EIS - p. 91, Item VI

EIS - p. 92, Item VII

final master plan

july 1976



NATIONAL RECREATION AREA/CALIFORNIA

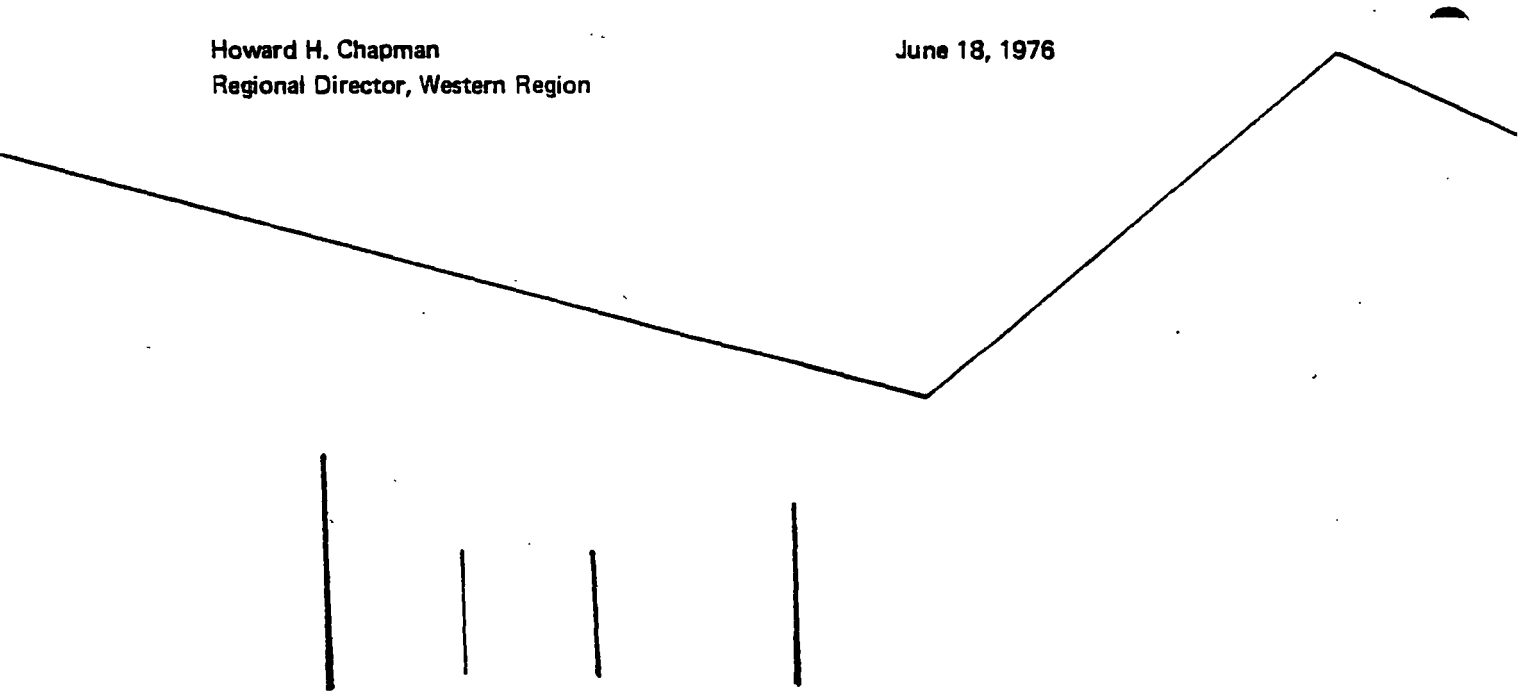
RECOMMENDED:

John W. Henneberger — June 2, 1976
Manager, Denver Service Center

L.J. Mitchell — June 14, 1976
Superintendent, Whiskeytown National
Recreation Area

APPROVED:

Howard H. Chapman — June 18, 1976
Regional Director, Western Region



Final Master Plan

WHISKEYTOWN UNIT
whiskeytown/shasta/trinity national recreation area

CONTENTS

PURPOSE, CONCEPT, AND OBJECTIVES	1
Primary Concept for the Management and Development Plan	1
Purpose of the Area	1
THE REGION	2
Relationship of Whiskeytown to Shasta and Trinity	2
Region Map	4
National Parks and Forests	5
State Parks	5
Local Population	5
HISTORY	6
THE LAND	8
LAND CLASSIFICATION	10
Land Classification Map	11
RESOURCES	13
Natural Resources	13
Unstable Soil Area Map	14
Principal Vegetation Association Map	15
Special Resources	19
Special Resources Map	21
THE PLAN	25
Concepts of Use Map	27
Water Zones Map	29
Existing Development Map	35
General Development	37
General Development Map	39
Utilities	48
External and Internal Threats	49
APPENDIXES	51
A: Management Objectives	52
B: Legislation	55
C: Bibliography	61
D: Consultants and Team Members	63

PURPOSE AND CONCEPT

PRIMARY CONCEPT FOR THE MANAGEMENT AND DEVELOPMENT PLAN

The principal objective of the management and development plan is to analyze the natural and special resources of the Whiskeytown unit of the Whiskeytown/Shasta/Trinity National Recreation Area, and to plan its development and use in such a manner that the broadest spectrum of recreational experience, complementary with the recreational opportunities at Shasta and Trinity, may be offered throughout the area. This variety of opportunities should meet the needs of visitors at all age and income levels, while considering reasonable conservation, development, and replenishment of the area's total resources.

PURPOSE OF THE AREA

Whiskeytown, administered by the National Park Service, is a unit of the Whiskeytown/Shasta Trinity National Recreation Area established by Congress on November 8, 1965, under Public Law 89-336 to "provide . . . for the public outdoor recreation use and enjoyment" of the specified reservoirs and surrounding lands "by present and future generations and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters. . . ." The Shasta and Trinity units are administered by the Forest Service. The legislation requires that the administration of each unit be coordinated with the Central Valley Project and that their administration include "such management, utilization, and disposal of renewable natural resources as, in the judgment of the respective Secretary will promote or is compatible with, and does not significantly impair" the primary purposes.

In accordance with the National Park Service's administrative definition and guidelines for national recreation areas, acceptable activities include boating, swimming, scuba diving, water skiing, fishing, hunting, hiking, horseback riding, motor trail driving, tubing, camping, and picnicking. Various winter sports are also permitted. Other uses, when they do not impair esthetic quality or scenic values for recreational or reclamation purposes, may be permitted: harvesting of timber, utilizing leaseable and nonleaseable minerals, and grazing of grassland. These purposes are less restrictive in their preservation requirements than a natural national park or national monument. These latter uses must also be evaluated against their environmental impact and any loss of scenic or esthetic quality that might otherwise be an integral part of the outdoor recreational experience provided by the area.

THE REGION

The Whiskeytown unit contributes to a truly gigantic recreational complex that offers public recreational facilities, including three superb natural national parks, thousands of square miles of national forests, vast man-made lakes, state parks, and several major rivers — all within a 200-mile radius. Whiskeytown lies within a 3½-hour driving range for 5½ million people who live in the small farms and rural towns of southern Oregon, in the Central Valley and northern coast of California, and in the urban centers of Sacramento and the San Francisco Bay area. Extending southward, major freeways provide "a day's drive" access to Whiskeytown for millions of people in the Los Angeles basin.

RELATIONSHIP OF WHISKEYTOWN TO SHASTA AND TRINITY

The Whiskeytown/Shasta/Trinity National Recreation Area offers a variety of lake-and-backcountry conditions aloowing for distinct recreational options to the visitor. Because of the proximity of the three units, they should be considered complementary facilities, each capable and uniquely qualified to offer certain special recreational activities.

Whiskeytown lies 22 miles from Clair Engle Lake and 18 miles from Shasta Lake. Whiskeytown's 42,000 acres comprise approximately half the size of the Trinity unit and one-fourth the size of the Shasta unit. The contiguous landownership of the Whiskeytown unit allows management, control, and development opportunities not possible on Forest Service units because of their checkerboard ownership patterns. Clair Engle Lake behind the Trinity Dam is five times the size of 3,200-acre Whiskeytown Lake, and Shasta is 10 times larger than the Whiskeytown Lake. All are in rugged, mountainous terrain.

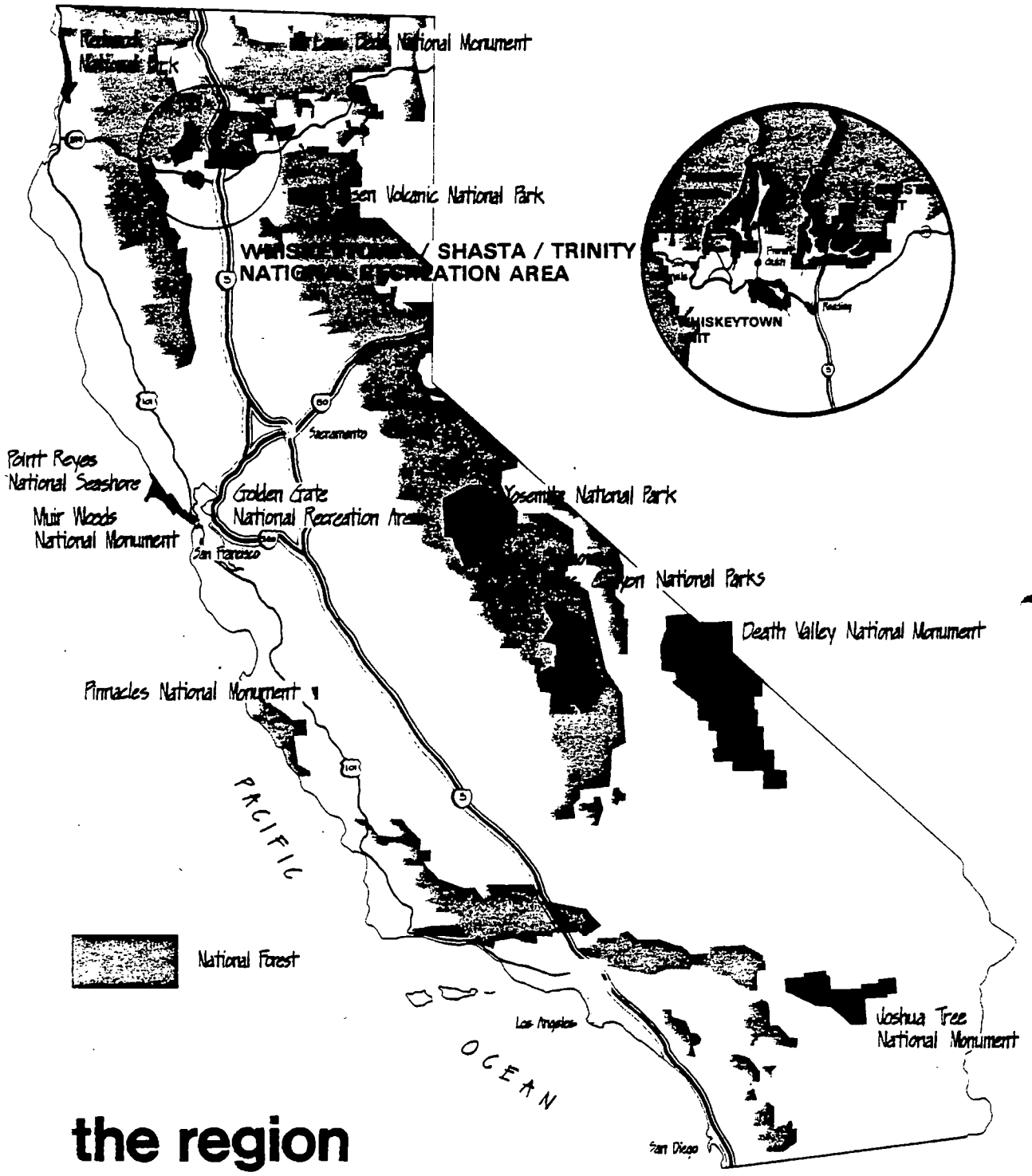
Of the three lakes in the Whiskeytown/Shasta/Trinity complex, only the Whiskeytown Lake retains its full elevation throughout the heavily used summer months, with an average drop of 3 feet in the spring and fall. A maximum drawdown (a lowering of the water level) of 15 feet occurs in the winter when visitor use is at its lowest. The high summer water level allows the development and use of excellent sandy beaches. By contrast, the Shasta and Trinity unit reservoirs are drawn down throughout the summer months to supply irrigation water for farming in the Sacramento/San Joaquin Valley and to prevent saltwater incursion into the delta of the

rivers. For example, Clair Engle Reservoir in the Trinity unit dropped as much as 22 feet below high water by September 1, 1972. At Shasta Lake, the drawdown on the same date was approximately 34 feet! These summertime drawdowns expose a broad belt of clay and rock shoreline making fishing, beach playing, and swimming difficult. Unlike Whiskeytown, there are no sandy beaches at Engle or Shasta Reservoirs. Because Whiskeytown is is spared these problems during the busiest season, it is in many ways the most attractive of the three units. Consequently, most of the present recreation activities at Whiskeytown are daytime water-oriented sports.

The long stretches of lake surface and relatively calm waters at Shasta and Clair Engle Lakes provide more useful water surfaces for high-speed motorboating and for water skiing than at Whiskeytown Lake.

The establishing legislation, Public Law 89-336, for the Whiskeytown/ Shasta/Trimity National Recreation Area states that "the two Secretaries shall coordinate their planning and administration of the respective units in such a manner as to provide integrated management policies for the recreation areas as a whole." From this directive, it has been recognized that Whiskeytown should primarily be developed as a day-use facility, and Shasta and Trinity should accommodate massive overnight use. The Shasta and Trinity units are larger and have considerably more level area for development of campgrounds and trailer and camper parking. Nevertheless, overnight use at Whiskeytown is substantial with over 77,000 campers recorded in 1975. The distance from metropolitan centers requires visitors to stay overnight and influences the need for even more overnight facilities. Without them, the unit cannot satisfy a broad spectrum of people from beyond the immediate locality and will become a predominantly regional park or a temporary daytime stopping point for travelers passing through. The unit has the physical capability of providing a reasonable balance of facilities for both day-use and overnight visitors, and elimination or curtailment of the latter would severely limit the full use-potential of the area's recreation resources. Full backcountry use, for example, would not be possible without provisions for staying overnight.

At the present time the Forest Service is nearing completion of a land-use plan for the recreation development and management of the Shasta and Trimity units. Conferences with members of the Forest Service land use planning team have indicated their emphasis will be placed on overnight use and regulating lake use toward accommodating water skiing and motor-boats of all speeds as contrasted with the quieter sports of sailing, canoeing, and swimming, which are more adaptable on Whiskeytown Lake.



the region

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With the physiographic constraints on campground development, it is unlikely that the Shasta/Trinity units will have any difficulty with excess duplication of facilities at Whiskeytown. The plan for Whiskeytown has been coordinated with the Forest Service efforts throughout the planning process.

NATIONAL PARKS AND FORESTS

The Forest Service provides facilities for overnight camping on their extensive recreation lands. There are many other Federal, state, and county outdoor recreation facilities in nearby Cascade, Trinity, and the Sierra Nevada Mountains. Many of these facilities are in the extensive national forests of northern California and southern Oregon. In addition to these recreation areas, the National Park Service manages Redwood, Lassen Volcanic, Lava Beds, Oregon Caves, and Crater Lake National Parks, and other monuments within a few hours' driving time.

STATE PARKS

State parks are available in the region, and include the Shasta State Historic Park, which lies 1½ miles from Whiskeytown, and the Joss House Museum at nearby Weaverville. Castle Crags and Burney Falls State Parks, although considerably smaller than Whiskeytown and non-water oriented, offer similar recreational facilities.

LOCAL POPULATION

The town of Redding lies 8 miles east of Whiskeytown, and with its associated communities, has a population of about 25,000 people and a trade center that accommodates 100,000 people with its numerous motels, restaurants, and convention center. Redding is also served by air, rail, and bus; rental cars are available at Redding for travel for travel to Whiskeytown.

For the towns of Redding, Red Bluff, Corning, Orland, Chico, and other small communities within an hour's driving radius, Whiskeytown serves as a local regional day-use park. The overnight facilities for camping in tents, campers, and trailers, however, are largely filled by visitors from the urban centers of Sacramento, San Francisco, and the cities of the Central Valley.

HISTORY

The known history of man's presence in the Whiskeytown area has been fixed at approximately A.D. 900 from archeological investigations of sites inhabited by the Wintu Indians. However, recent excavations in nearby areas have uncovered remains dating at approximately 2,000 B.C. and 7,000 B.C. Although no evidence of permanent habitations are known, sites of tribal encampments that were known to exist were almost entirely destroyed by thorough and devastating placer and other mining practices during the 1850's.

The earliest European men known to reach the vicinity were Jedediah Smith and his party in 1828. Other "mountain men" followed Smith and opened new trails that in a short span of 20 years were choked with thousands of enthusiastic seekers, hoping to acquire a quick fortune in the gold fields. The "rush" in the Whiskeytown area began in 1848 at Reading's Bar, about 20 miles away, where Major Pierson B. Reading discovered the first gold in Shasta County. Whiskeytown was settled in 1849, and unlike most of the bustling towns that disappeared with the exhaustion of the gold mines, it persisted as a tiny hamlet. Some of its old brick and stone buildings stood until 1963 when they were inundated by the reservoir formed after completion of the dam. All that remains of the town proper is the Whiskeytown Store that was moved to high ground on the Whiskey Creek Road and still operates on a private inholding as a store, gas station, and post office. The cemetery was moved to a location south of the dam.

Only 3½ miles to the southeast of Whiskeytown, the town of Old Shasta — whose remnants have been carefully preserved by the State of California — was the center of mining activity, with as many as 100 freight teams stopping there in a single night. By 1850 Shasta was a thriving mining community, and by 1853 $100,000 in gold per month was being shipped from that new city; most of the gold came from the sluice boxes and lodes situated within what is now the Whiskeytown unit. The Tower House (hotel) site, the piers of the covered bridge on the Tower toll road, and the Camden House are important remnants of the period that are still within the area's boundaries.

At the French Gulch (formerly known as Morrowville) just outside the park's north boundary on Clear Creek, the diggings were very rich. In their avid search for gold, some of the miners tore down their cabins to follow the leads extending under them. Once an important stopping point on the Scott Mountain Road to Oregon, which opened in 1859, French Gulch lost much of its traffic when the railroad was extended up to the Sacramento Canyon in the 1880's. Today, French Gulch represents a sleepy community whose old hotel, fieldstone store and saloon, and white frame church and houses depict the atmosphere of the gold days.

The Tower House Historic District is listed on the National Register of Historic Places. The historic district contains approximately 20 acres, and encompasses 14 sites or structures. The nomination form was prepared by Historian F. Ross Holland, Jr., on May 24, 1971, and entered on the National Register on July 2, 1973.

The irrigation system, situated adjacent to the Tower House Historic District, has been declared eligible for inclusion on the National Register of Historic Places. The irrigation system consists of two structures with associated irrigation ditches, flumes, and pipes.

The French Gulch Historic District, a property on the National Register of Historic Places, is situated several miles from the tower House Historic District and outside of the Whiskeytown unit.

Surveys and studies to inventory and nominate archeological and historic properties to the National Register of Historic Places in accordance with E.O. 11593 and the National Historic Preservation Act of 1966 are not completed. Future professional studies and a historic resources report may identify additional properties apparently meeting the National Register Criteria, 36 CFR 800.10.

THE LAND

From the information center on California 299, almost the entire Whiskeytown recreation area can be seen, except for the Crystal Creek drainage system. The 3,250-acre lake extends to the northwest, the highway moves parallel with the north shore of the lake with its brushy, treeless steep slopes, and the wooded shores rise to high forested ridges dominated by the 6,209-foot peak of Shasta Bally on the southwest. It is a ruggedly beautiful scene across the lake with the surrounding steep, tree-covered hills mirrored on its surface. The north side of the lake has been sharply cut by the construction of California 299.

The hills above the highway are steep and exposed to the hot, drying influence of the sun. This area is a brushland of manzanita, toyon, and poison oak with sparse growths of oaks and pines standing above the brush. Smelter operations during the period of the First World War killed almost all the large trees on this side of the lake, and they have been slow to reforest. This vegetative type is in harsh contrast to the lake's cool waters and the forested south shore. Whiskey Creek and Oak Bottom contains the only land that is flat enough to accommodate recreational facilities. Fortunately, these sites have some groves of small pine and oaks.

By contrast, the land on the south side of the lake contains the major flat areas adjacent to the shoreline. This land is situated near the streams that flow down from the steep canyons and slopes of the mountainous terrain that compose the southern backdrop of the lake. These lakeshore flat areas are ideal for recreational development and the Brandy Creek and Dry Creek areas have been used for initial development of this side. The Boulder Creek area contains the largest resources of flatland suitable for facility expansion (about 85 acres). Here are shallow water beaches, good forest cover, sufficient areas to develop parking, ample picnic and camping terrain, and the running water of Boulder Creek.

The hills above the south shore rise to high ridges topped by Shasta Bally — the highest and dominating point in the unit. These hills are covered with the remains of once vast coniferous forests, and much of its surface is scarred by badly managed logging with resulting erosion occurring within the last quarter century. These effects are not readily apparent, however, when seen from the highway across the lake.

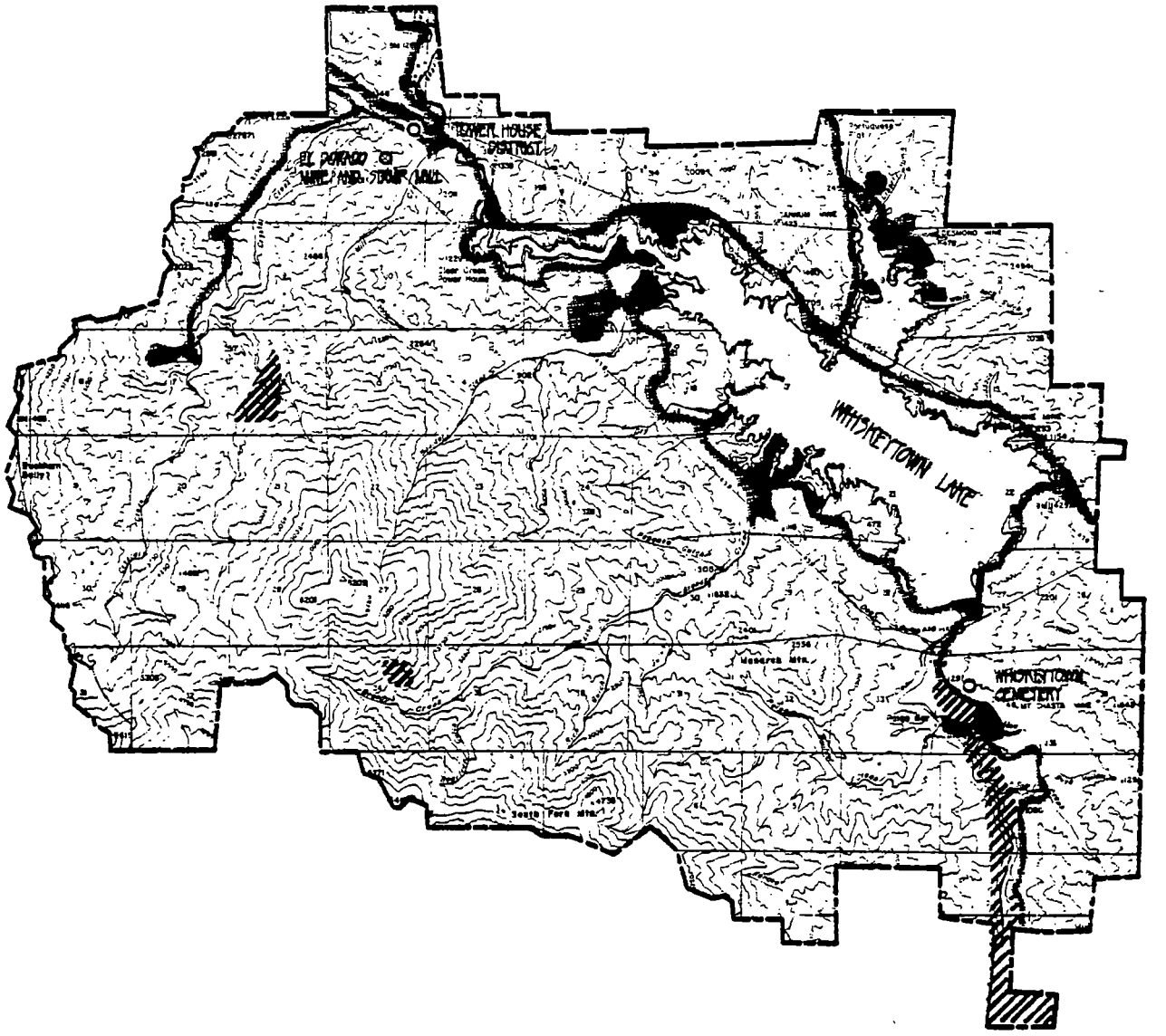
South of the dam along Clear Creek, the land flattens until it reaches the southern boundary of the unit. The stream continues in a steep-walled canyon where easement rights have been added to the national recreation area for a distance of about one mile below the established boundary.

The upper part of Clear Creek before it flows into the lake and the places along the lower part below the dam are banked by tailings from 19th-century placer mining. Native vegetation has been slow to reestablish itself on these piles of sterile gravel. These areas are the only places in the Whiskeytown unit where an exotic plant — the black locust — has become widely naturalized.

LAND CLASSIFICATION

The land classes have been established by the National Park Service land-classification system.

The forest classification map prepared by Hammond, Jensen, and Wallen in 1969; the U.S. Geological Survey map of the French Gulch Quadrangle; the state geologic reports on the area; and historic and NEED reports were used as guides in determining the land classifications for the unit.



CLASS 1
HIGH DENSITY RECREATION AREA

CLASS 2
GENERAL OUTDOOR RECREATION AREA
vehicular access corridors and visitor convergence points

CLASS 3
NATURAL ENVIRONMENT AREA

CLASS 4
OUTSTANDING NATURAL AREA
Clear Creek canyon and road
falls on Crystal Creek and Brandy Creek

CLASS 5
PRIMITIVE AREA
(none)

CLASS 6
HISTORIC AREA

SEE "WATER ZONES" FOR LAKE CLASSIFICATION

land classification

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Class I lands are those associated with high-density recreational development, such as cabins, restaurants, recreational vehicle campgrounds, marinas, some of the large parking lots have adjacent swimming beaches or launching ramps. These lands include some parts of the now developed Brandy Creek and Oak Bottom and the proposed new areas at Boulder Creek and Whiskey Creek. They are small portions of the more common Class II lands.

The park lands under Class II are those that are necessary and desirable for administrative, interpretive, and less dense recreational facilities. Also, two-way roads remaining in the final circulation system are classified as Class II – general recreation areas. These areas are represented by the visitor center, the administrative headquarters, group picnic or camping areas, Kennedy Drive, the NEED facility, and the low-density camp and picnic areas.

With relatively few areas in Class I, II, and Class VI (areas of historic or cultural significance), most of the remaining areas of the Whiskeytown unit fall in Class III, the "natural environment" areas. Class IV lands are minor in area and include unique natural features. Clear Creek Canyon, the Falls on Brandy Creek, and Crystal Creek are included in Class IV. National recreation areas need not include primitive areas – Class V, and this unit has none. However, the predominantly Class III areas are the essence of the unique quality of the outdoor recreational experiences, and represent its prime resource. Although the National Park Service land-classification system does not include water areas, the lake or reservoir is so dominant and of such key importance as an esthetic and recreational resource that it is classified separately on the plan as "Water Zones."

Although the site of the historic gold rush town lies buried beneath the waters of the lake, the 1852 Camden House with gardens of the period, a gold mine with its equipment, the site of an early hotel – the Tower House, and other associated elements of a historic nature are intact and easily defined near the intersection of California 299 and French Gulch Road. This historic area has been designated as Class VI. The Whiskeytown Store and Whiskeytown Cemetery were both moved to new locations above the water level of the lake. Because the store is situated on a private inholding, it is not classified. The active cemetery, administered and maintained by Shasta County, has been placed on Class VI lands.

RESOURCES

Resources common to the region may be categorized under geology, vegetation, climate, fish and wildlife, and topography. Special resources are the particular characteristics of the lake, the watercourse, certain vegetative types, the backcountry, and the historic areas.

NATURAL RESOURCES

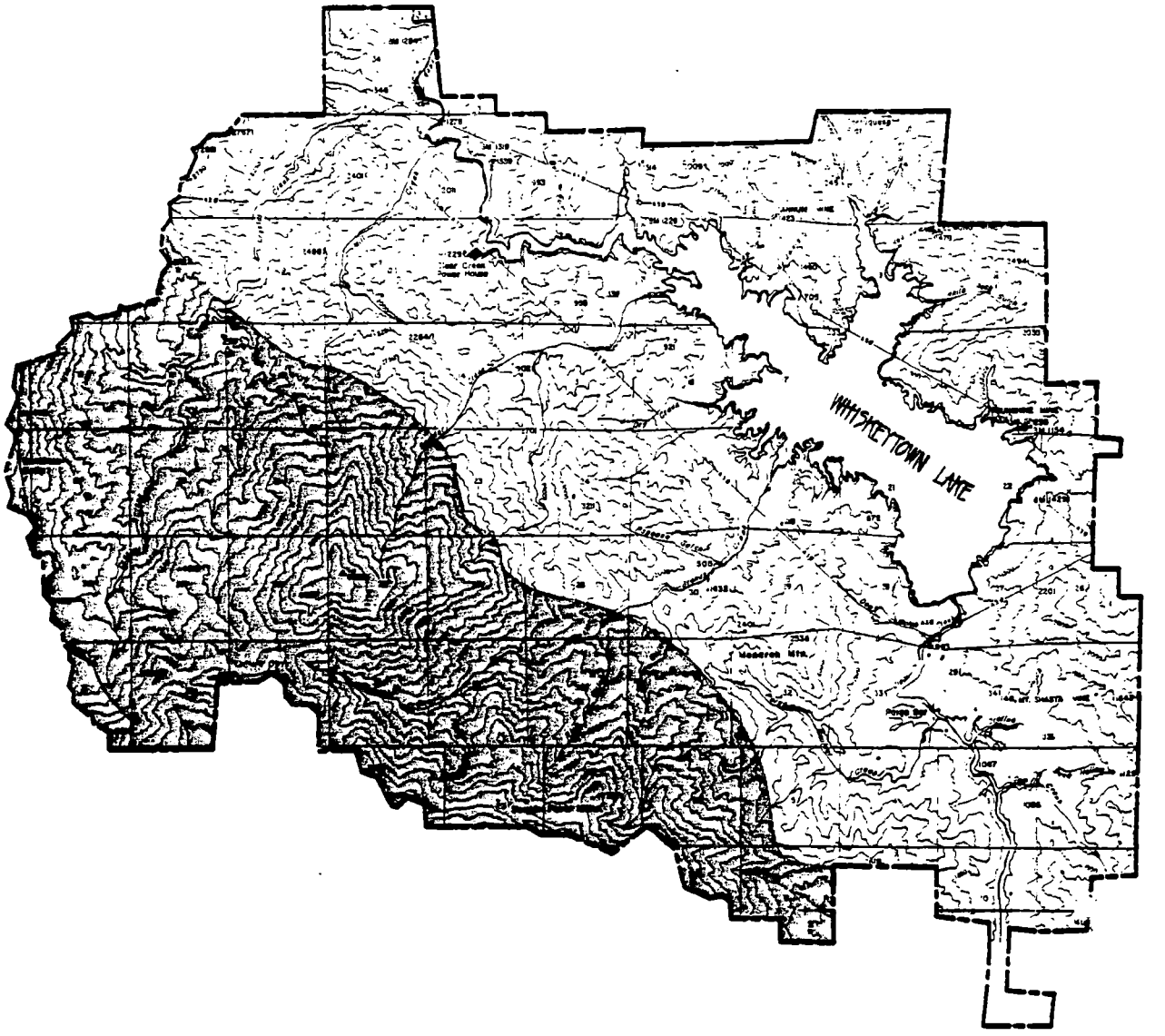
Geology

Geologic action in the Whiskeytown area has created four unusual formations: Clear Creek Canyon below the dam, Brandy Creek, Crystal Creek Falls, and the mineral and gas seeps on the Hoadley Fault. However, in most respects, its features are typical of the Klamath Mountains, of which it is a part. The oldest formation — the Copley greenstone — forms narrow, deep gorges and is generally overlain by the Balakala rhyolite, which in turn is overlain by either the Kennett or Bragdon sedimentary formations. These are intruded by the Shasta Bally batholith of Late Jurassic or Early Cretaceous age. This batholith, composed of biotite-quartz diorite, forms the principal land feature in the area. The batholith's northeastern edge lies approximately two miles from the lake's southern shoreline. The soil of the batholith area is decomposed granite and highly prone to erosion; the soils between the batholith edge and the shoreline are relatively stable and capable of standing on slopes of up to 75 percent. The Paleozoic rocks of the area range in age from Middle Devonian to Mississippian.

The underlying rocks are extensively tilted, folded, and fractured. Metamorphosed areas are generally ore-bearing, and have produced copper, zinc sulfides, pyrite, gold, and silver. The erosion-prone batholith and the more stable soils around the lake have influenced the location of roads and other facilities.

Vegetation

Brush is the most common cover in the lower elevations of the park near the lake and at Clear Creek below the dam. This is especially true on slopes with southern and western exposures. The brush principally consists of manzanita, ceanothus, toyon, chamise, poison oak and scattered scrubby oaks, and digger pines. This hot, dry country offers little shade in the summer. Knobcone pine forests — groves of closely spaced, medium-height trees that offer some shade at lower elevations — are fortunately found at most lakeshore development areas.



DECOMPOSED GRANITIC SOIL

unstable soil area

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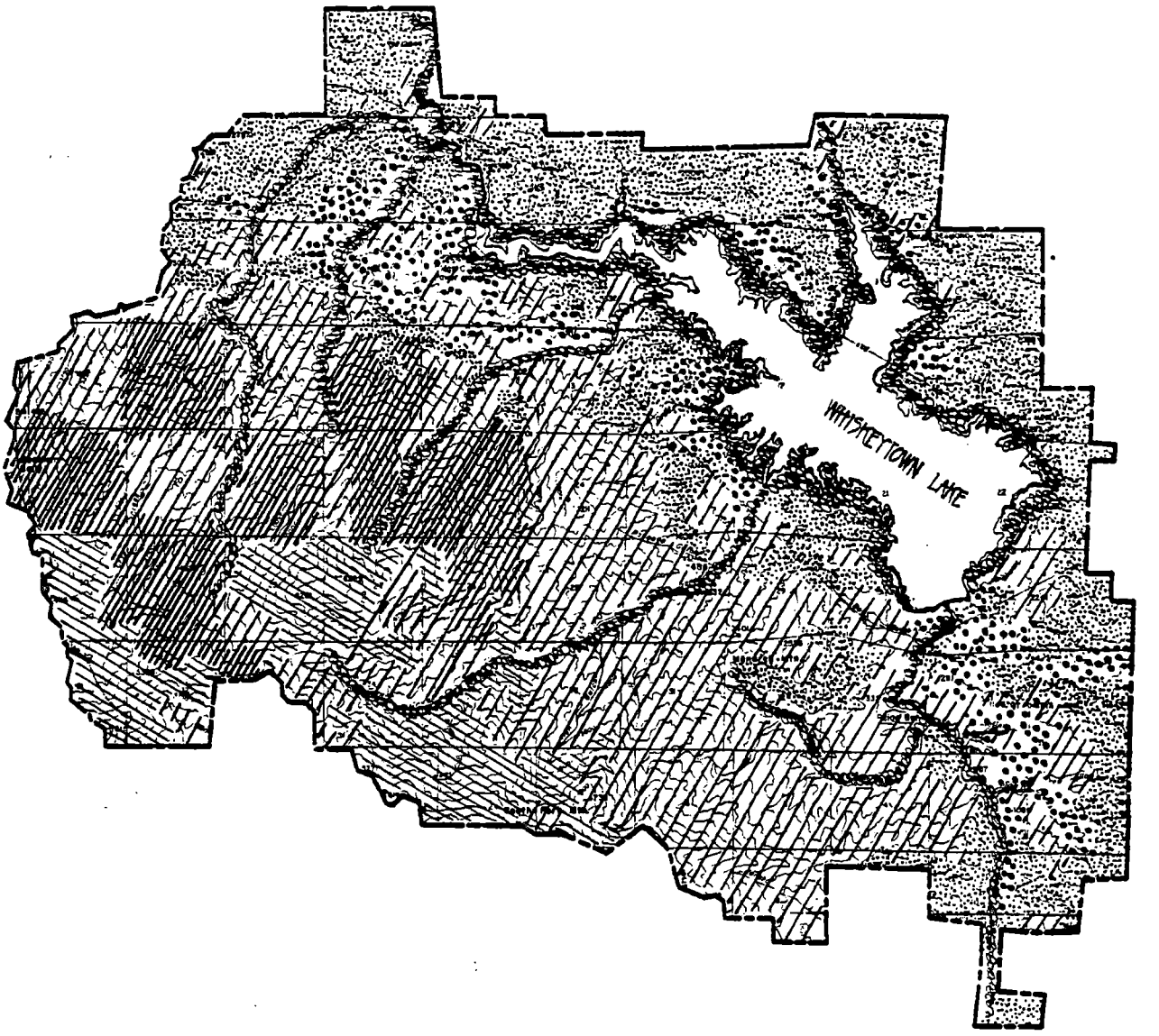

FOREST

mature forest of mostly pines and douglas fir

logged forest with mostly young pines and douglas fir

sparse forest of mostly white fir

sparse forest of mostly knobcone pine

RIPARIAN GROVE

dense groves of alder willow and maple

dry upland vegetation changing to mostly white alder

BRUSHLAND

brush with small hardwood trees and digger pines

principal vegetative associations

WHISKEYTOWN UNIT

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The riparian strip at the lakeshore is developing willows and alders, slowly replacing the brush, scrub oaks, and pines at the reservoir's edge. Along the stream banks such mousture-loving plants as white alders and bigleaf maples flourish and provide lush sylvan settings for visitors.

Above the lake, especially on its south and west sides, coniferous forests of ponderosa, sugar pines with Douglas fir, and incense cedar predominate. They form the bulk of the green backdrop for the lake. All but about seven square miles of forest has been logged in the past quarter century; however, this remaining portion provides cool, green havens that can be expected to extend across the logged areas as the young trees mature.

On some of the higher ridges along the southern and western boundaries in the decomposed granite soils are forests of scattered white fir with prolific brush including ceanothus, bear berry, chinquapin, and exposed soil. The considerable snowfall in the winter, coupled with the sterility of the eroded soil, indicates that this will continue as an open forest.

Climate

The climate of the Whiskeytown area is mild with long warm-to-hot days throughout most of the summer, particularly on and around the lake where visitor use is concentrated. The winters, although too cool for water-oriented recreation or camping, have only a few freezing days. Average high temperatures range between 50° and 65° from November through April. These are the months when 90 percent of the average 60 inches rainfall occurs, leaving May to October, the period of highest visitor use, almost entirely free of rain. Daytime high temperatures during the May-to-October period range from 75° to 105° with nightime lows between 50° and 70° allowing comfortable movement in the evenings, and with enough variation in temperature to provide relief from the daytime heat.

Temperatures are recorded at the park headquarters near the dam, 100 feet above the lake. Daytime highs at the lake level are somewhat higher than at the weather station. Distinct differences in temperature occur as a result of elevation. As much as 30-degree cooler temperatures have been noted on the ridges and on the top of Shasta Bally than at the lake level. This cooler climate at the higher elevations will be encouraging to backpackers, horsemen, and operators of four-wheel-drive vehicles seeking cooling relief from summer heat. In winter, wet snows accumulate on the high ridges and peaks. Although there usually isn't enough snow to make good skiing possible, it is sufficient for snow play. It is by far the closest snow to Redding. A five-year study of snow conditions has not been encouraging for skiing.

Several sharply differing microclimates exist even at lake level. The south shore area receives about 90 inches of rainfall annually as compared to the 60 inches occurring at the weather station at the east end of the lake. The north side receives even less rainfall than the headquarters' weather station. These variations clearly influence the vegetative types.

During the winter months, low moving clouds leave wet snow on the high ridges and on Shasta Bally. Although high winds prevent much of the snow from accumulating, some of it persists into the spring season. A prevailing, moderate wind blows across the lake in the southeasterly direction and is strong and consistent enough to provide ideal conditions for sailboating on the lake, as well as offering comfortable circulation of air around the lake during the warm summer months.

Fish and Wildlife

The mountainous country surrounding the lake resembles the terrain conditions extending westward to the Pacific Coast and north into Oregon. Consequently, the wildlife of the Whiskeytown unit is represented by the species common to the southern Klamath Range. The bald eagle is the only endangered species within the park but no known nesting sites exist. Hunting of game animals and birds is allowed under Federal and state regulations in designated areas. Big game animals include Colombian black-tailed deer, Russian boar, and black bear; smaller game animals consist of squirrels, rabbits, and raccoons.

Game birds represented here are mountain quail, bandtail pigeon, valley quail, mourning dove, wild turkey, and waterfowl. Migratory birds are present in limited numbers. The lowering level of the lake during the cooler months inhibits the growth of shallow water plants upon which the birds feed. Where shallow water plants are established on the lake, the effect upon birds is minimal. Geese, coots, and canvas back, mallard, and pintail ducks are seen and add appreciably to the visual enjoyment of the visitor, but are too limited in number to attract many hunters. Hunting seasons on most game animals occur when water-oriented visitor use is at its lowest point, resulting in little conflict between user groups. During the spring, summer, and fall, visitors in the backcountry can observe and enjoy the sight of these animals. Visitors commonly see deer, skunk, ringtail cat, raccoon, squirrels, chipmunks, rabbits, and various reptiles, all in their native habitat.

The lake, with over five square miles of water surface ranging in depth from a few inches to 200 feet and temperatures from 75^{o} on its surface

to 45° in its depths, provides an ideal habitat for catfish, sunfish, carp, and largemouth and smallmouth bass in the warm waters; German brown and rainbow trout and Kokanee salmon frequent the cooler waters. Most of the species have been introduced, and the number of trout is augmented each year by fish plants from both state and Federal hatcheries. The Kokanee, or "land-locked" red salmon, seem to reproduce in adequate numbers to match their food supply.

Immediately prior to the most recent land acquisitions, the intense lumbering activity in the granitic soils on the southern mountain slopes caused heavy siltation in the streams flowing into the lake, which severely reduced spawning up the streams. The cessation of timber cutting and the regrowth of brush has slowed erosion, and the streams are beginning to run clear in the rainy season, permitting trout and Kokanee to navigate up the streams again. Although these runs will never be sufficient to replenish fish stocks up to the point that would satisfy sport-fishing needs, the re-establishment of this natural life cycle represents an important factor in returning the lake and its surrounding backcountry to an ecologically sound unit. The streams are now being planted with catchable trout from state hatcheries.

Land Conformation

The shape of the land offers opportunities for a variety of recreational experiences, but also places severe limitations on facility development and ultimately on visitor use. The area can be divided into three basic areas: lake surface, lands of less than 20 percent slope, and lands of 20 percent slope and greater. As the map shows, land suitable for development of car, camper and trailer parking, camp and picnic areas, and other visitor accommodations is extremely limited and situated almost exclusively next to the lake's shoreline on the less than 20 percent slope lands. Because access to Whiskeytown is by motor vehicle only, the availability of relatively flat parking space will have a direct effect on the number of users the areas will accommodate. The available usable land must be carefully balanced between parking and recreational activities requiring relatively level areas such as camping and picnicking.

However, the increasing degree of slope and the generally greater difficulty of the terrain as one moves away from the shoreline acts as a natural filter, so to speak, on the density of users on the land and the type of recreational activity in which they engage. Recreational activities near the lake include swimming, boating, fishing, scenic driving, walking, biking, camping, picnicking, and socializing. Back-

country activities involve primitive picnicking and camping, trail biking, four-wheel and auto driving, hunting, hiking, fishing, and horseback riding. The higher elevations offer hiking, hunting, riding, four-wheel vehicle driving, and primitive camping. The high ridges also provide a scenic backdrop around the lake and its heavily used shoreline.

SPECIAL RESOURCES

The Lake

Although it is becoming progressively naturalized, the lake owes its existence to a dam and the need for water downstream in the vast and intricate system of the California Water Project. It probably will remain the outstanding recreational attraction of the Whiskeytown unit. Several important factors contribute to its high recreational use: the minimal drawdown during the period of high visitor use during the summer, the constant supply of fresh cold water at the upper or western extremity of the lake for fishing, warmer water toward the eastern end for swimming from the numerous flat beaches, quiet inlets for canoeing and picnicking, and the prevailing southeasterly wind across the lake for ideal sailboating.

The Creeks

The creeks flowing into the lake from the backcountry contibute water, provide spawning areas for lake fish, host some small trout of their own, and provide a network of highly pleasant aquatic recreational fingers extending up into the valleys and canyons of the high slopes surrounding the reservoir. The eight major creeks — Clear Creek, Crystal Creek, Brandy Creek, Whiskey Creek, Boulder Creek, Paige Boulder Creek, Willow Creek, and Mill Creek, with their crystalline quality and the pleasing sound of their rapidly descending fall to the lake — define delightful shady corridors for the location of camps, picnic sites, and trails.

The Backcountry

The backcountry forms the greatest area of the Whiskeytown unit, yet it is the least understood and least used by the visitor. Its special resources include a number of points of interest toward which trail and road exploration can lead. These have limited-to-full access now. As visitor use increases and the lake shoreline facilities become more crowded, the backcountry can relieve user pressure on the lake and offer recreational experiences of relative solitude and a closeness to nature that is quite unlike the camping and water-oriented activities of the lake area.

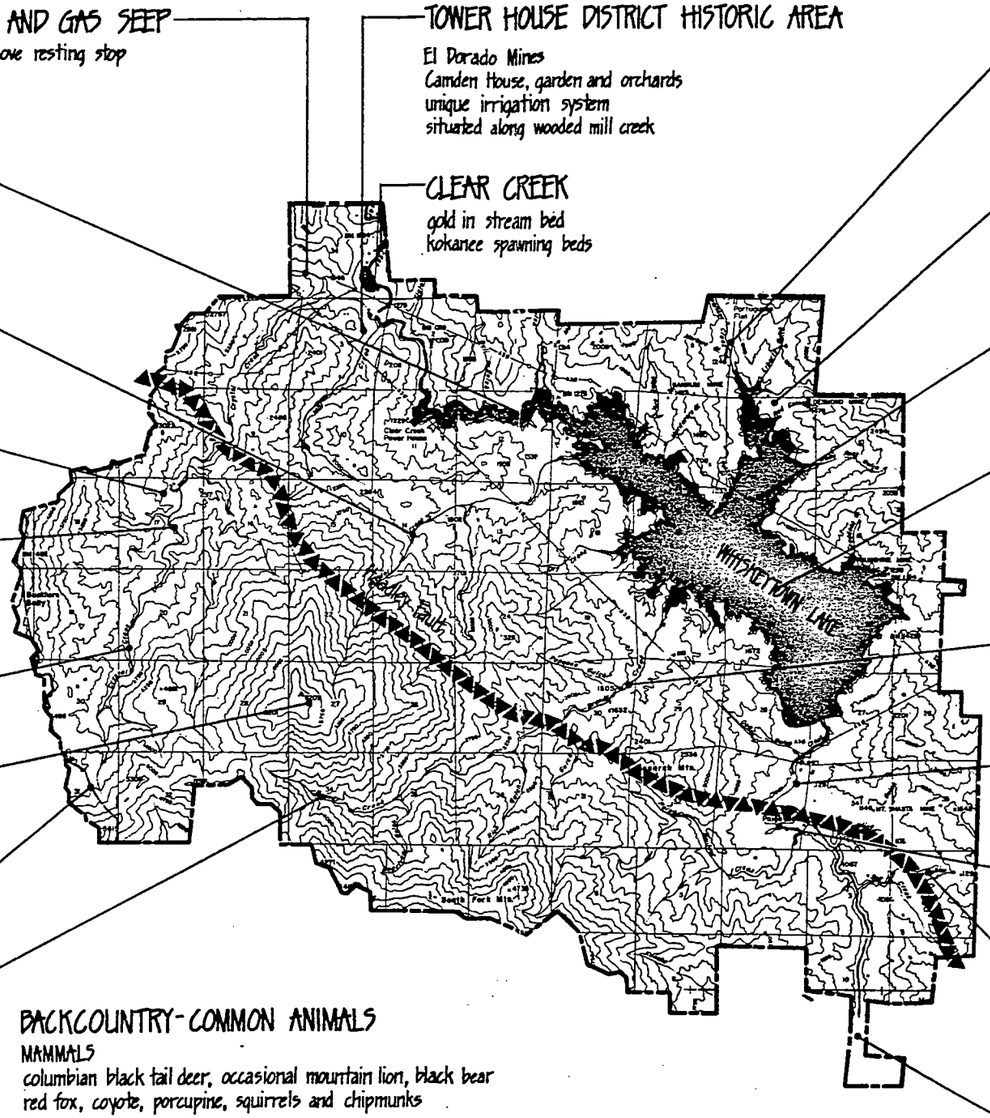
Besides the quiet naturalness of the present and re-emerging forests, the rushing streams, and the changing views as the visitor moves through the mountains and canyons, the following are also points of interest of the backcountry.

Shasta Bally is the highest peak in the unit and in the immediate region. In the winter, its 6,209-foot top is snow covered, but by early June it is bare and the four-wheel-drive road to the top is passable. The road, which begins at the Brandy Creek developed area, climbs upward through changing views of valleys, streams, and forests with increasingly dramatic views of the lake, and views south to the Central Valley, and views east to the snowcapped Cascade Range. At the summit, the temperature drops to a breezy and cool level as contrasted with the temperatures at the lake. The view is a sweeping 360° and includes the Trinity Alps to the north and northwest. Here is an excellent location for an overlook and interpretive station. The television relay and transmission station situated on the summit, however, presents an intrusion into an otherwise remote and exciting termination to a mountain climb.

Coggins Mountain Park consists of a small five-acre reservation of virgin timber, set aside and fiercely protected by the previous owner of the land from loggers who were denuding the surrounding areas of saleable timber. Along the top of the ridge and just off the road from the Buckhorn Summit, it currently serves as a tiny oasis for stopping, resting, or picnicking by its clear spring under the shade of its huge trees.

Crystal Creek and Brandy Creek Falls are accessible by trail from four-wheel-drive vehicle roads. Because of their remoteness, these falls with their delicate shade-loving vegetation are protected from overuse and are points of outstanding beauty. Crystal Creek Falls, only recently discovered by a logging superintendent, cascades in three slightly separated falls in a steep-walled, fern-lined canyon for a distance of over 265 vertical feet. Brandy Creek Falls, while not as large and spectacular, is in a different canyon along the same trail loop and is another high point of interest.

Kanaka Peak, 2,618 feet, Little Bally, 5,419 feet, South Fork Mountain, 5,189 feet, and Buckhorn Bally, 5,053 feet, lie to the southeast and northwest of Shasta Bally. There are no vehicle roads to the top of most peaks, although they can be made accessible by hiking and horseback riding trails.



MINERAL AND GAS SEEP
migratory dove resting stop

TOWER HOUSE DISTRICT HISTORIC AREA
El Dorado Mines
Camden House, garden and orchards
unique irrigation system
situated along wooded mill creek

CLEAR CREEK
gold in stream bed
kokanee spawning beds

CLEAR CREEK ARM OF LAKE
calm, narrow area
cold water

BOULDER CREEK
lush vegetation
heavy rainfall

D. OF F. CONSERVATION CAMP
prison work camp
(lease terminates January 1987)

CRYSTAL CREEK FALLS
cool canyon setting (moss and ferns)
set of three falls for a combined height of 265 feet

CRYSTAL CREEK

SHASTA BALLY
wet snow during winter

RARE UPRIGHT FORM OF CEANOTHUS PROSTRATUS
common along this ridge

BRANDY CREEK FALLS
pleasant wooded setting

WHISKEY CREEK
beaver, kokanee

MacNAB CYPRESS WINDBREAK
originally grew in areas inundated by reservoir

WHISKEY CREEK ARM OF LAKE
calm, warm water

MAIN BODY OF LAKE
windy
secluded coves
scattered islands

BRANDY CREEK
90 inches of rainfall per year

WHISKEYTOWN CEMETERY
relocated from old Whiskeytown
old tombstones

N.E.E.D. CAMP
training facility
pond with aquatic plants

MINERAL AND GAS SEEP
along Hoadley Fault close to N.E.E.D. camp road

CLEAR CREEK CANYON
deep rocky canyon

BACKCOUNTRY - COMMON ANIMALS

MAMMALS
columbian black tail deer, occasional mountain lion, black bear
red fox, coyote, porcupine, squirrels and chipmunks

GAME BIRDS
valley and mountain quail, mourning doves, bandtail pigeon

VARIOUS REPTILES

special resources

N

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DSC | JUNE 76

Mineral and gas seeps occur on the Hoadley Fault at two places. Both are readily accessible by family car. One, a natural resting place for migrating dove, lies at the confluence of Crystal Creek and Willow Creek next to California 299; the other is just off the Igo County Road near the southeast corner of the unit. These seeps are of importance to the geologic interpretation of the Whiskeytown area.

The MacNab cypress *(Cupressus macnabiana),* once thought to be a rare species, is one of the more common California cypresses. However, California cypresses in themselves are not abundant. The only natural grove at Whiskeytown was removed and the site inundated by the reservoir. Some feel this was the discovery site of MacNab cypress in 1854. A few trees were salvaged by local residents and planted at various locations within the area as ornamentals.

The Division of Forestry Conservation Camp, situated in the hills five miles up a paved road from California 299, has permanent living accommodations for about 100 prisoners. Situated on land leased from the National Park Service until 1987, the facility has proven to be beneficial to some aspects of park operations. During 17 years of existence no known adverse effect to park visitors has occurred due to isolation from other users of the park and security measures. Crews from the camp have provided assistance in rescue searches, fire fighting, flood control, flood damage repair, stream stabilization, fuel modification, tree planting, and other related fire defense and conservation projects.

The NEED Camp on Clear Creek downstream from the dam represents a positive educational and interpretive asset currently in full use. Formerly a church camp, its main building including kitchen and dining hall has been extensively remodeled and improved. A parking area has been added, and new tree plantings have been completed by the Whiskeytown staff and citizen volunteers. Sixteen cabins house students overnight and have been modified to provide for year-round use. The NEED area is currently being used to teach environmental education through arrangements with the Shasta County Schools during the school year and for a Youth Conservation Corps (YCC) Camp during the summer. Currently, 300 acres surrounding the center are set aisde for its exclusive use. In addition, the NEED area is used for environmental seminars by local teachers.

The Judge Carr Power Station, Whiskeytown Dam, and the other engineering works associated with the power and water supply functions of

the lake, the fishery, flood control, and other conservation benefits of the reservoir system are special resources to be used in developing an interpretive program demonstrating the benefits of wise control of natural resources.

The Historic Area

The gold discovery sites became camps, and the camps became towns that supported and housed all the necessary commercial activities to mold any concentration of people into a new community. The commerce routes, the necessary supplies, and the movement of people between the sources of gold and their outlets to the nation and world required way stations, supply points, lodgings, and people to operate them on a continuing basis. Levi H. Tower built the Tower House to accommodate travelers along the wagon and the later stage route. This was a toll road built by Charles Camden. A unique irrigation system was constructed by Tower for a garden, ornamental plants, and orchard. This roadside haven of green was a pleasant and timely stopping point on the way to the diggings, to Weaverville, and later to Oregon on the new road through French Gulch, only two miles to the north. The Tower House gradually fell into disrepair; and was destroyed by fire in 1914. The Park Service has cleared the orchard of weeds, begun to restore the El Dorado mine upstream from the old covered bridge abutments, checked the deterioration of the Camden residence, cleared and protected the graves of Levi Tower and the family's Indian servant woman buried farther up the hill, and set the entire area aside for an historic site, which indeed it is.

Whiskeytown Cemetery, formerly at the old town's location (now covered by the reservoir) was moved to a permanent dry location within the boundaries of the park, about a mile south of the dam and next to the county road. It is in current use for burials, and administered by Shasta County.

The Tower House and French Gulch, two miles away, were a closely related part of a historical center of gold rush activity; both are on the National Register of Historic Places. The Tower House sprang up next to important diggings, adjacent to an important early road; the hotel and Camden House were situated at the intersection of that road with another road diverging west. The two houses are both historically and geographically inseparable. For this reason, the Park Service will coordinate their efforts in planning and interpretive programs with the state to express the interrelationship of the town of Shasta and French Gulch, creek, roads, and the Tower House area. (See the Whiskeytown historic structure report, Tower House district.)

THE PLAN

THE PRIME GOAL

The principal recreation goal of this plan is to integrate the development and broaden the recreational options of the entire unit by providing improved access, services, and facilities, not heretofore possible, in the backcountry and around the lake.

PRIOR PLANNING AND DEVELOPMENT EMPHASIS

The Whiskeytown unit, established in 1965, has had a short life in comparison with many areas of the National Park System. In this short space of 11 years, development has proceeded on the basis of an interim master plan covering only those areas around the perimeter of the lake as needed and purchased by the Bureau of Reclamation to protect and manage the reservoir. Meanwhile, land acquisition from private owners has been completed to fulfill the Congressional mandate for the authorized total park area. In the meantime, visitor use has increased from less than 400,000 visits in 1964 to 1,274,000 in 1975. Because facilities and land ownership have centered around the lake, almost all of the visitor activity has taken place there.

CONCEPTS OF RECREATIONAL USE

Concepts of use are allocated to zones based on land classification (see map), stability of soils, topography, access to lake or stream water, the vegetation components, vehicle access, educational value, and historic remains. Uses of the lake are further zoned to provide water safety and increased recreational enjoyment. Use zones are the lake, the flat areas near the lake, the backcountry forests, the hot, dry brushlands, the environmental study zone, and the historical areas.

The zones, though markedly different in character, are interlocked and interdependent ecologically and in their use. Each lends itself to particular uses that may be defined conceptually as shown on the plan "Concepts of Use." These zones set up a pattern of contrasting high-use areas connected by traffic ways, but separated by broad open-space buffers.

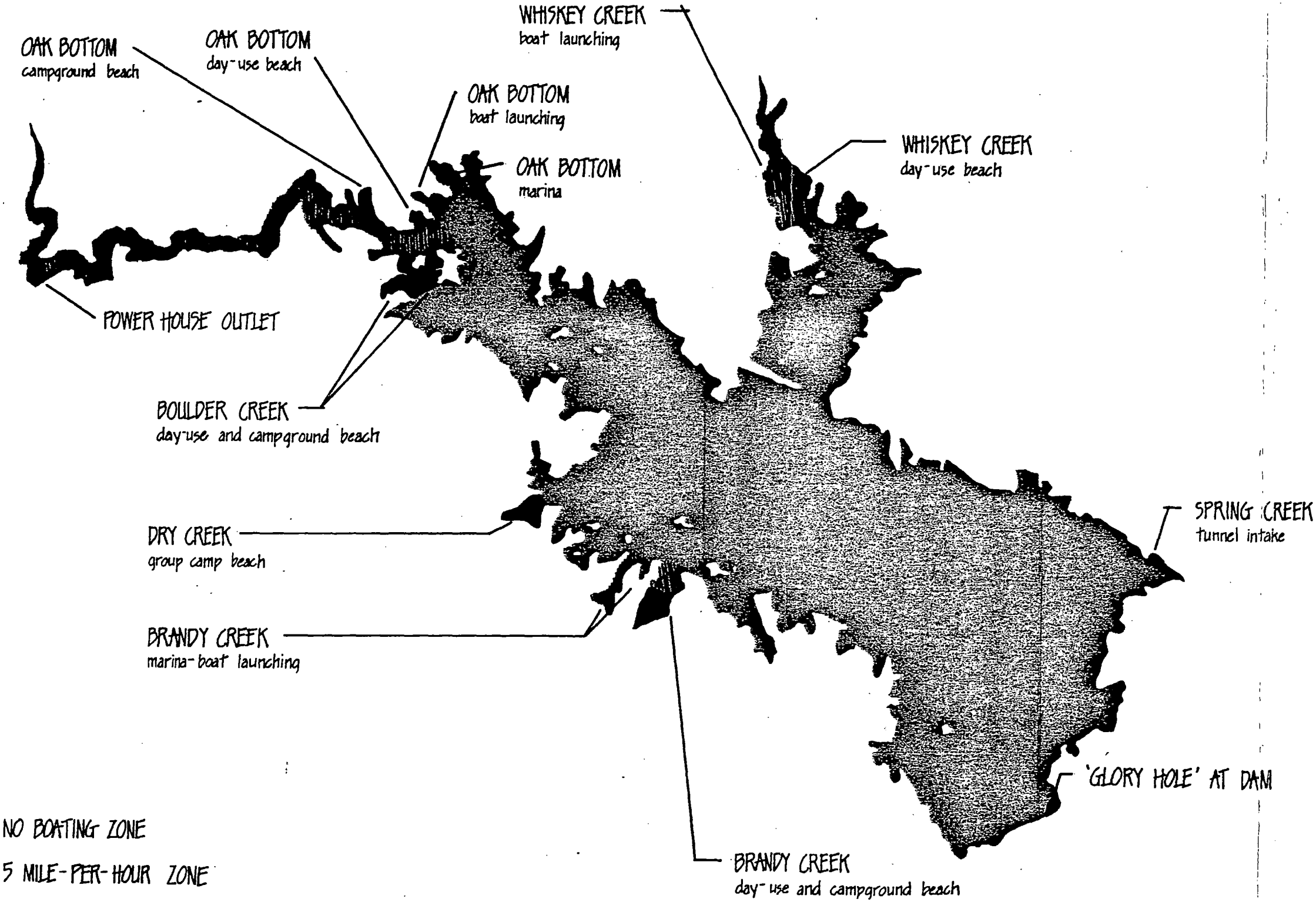
The broad concepts for recreational land use are as follows: the lake and high-density belt immediately around it, a medium-density zone penetrated by all-vehicle roads terminating at trailhead parking areas and campsites, and the low-density backcountry zone with some four-wheel-drive vehicle roads, laced with hiking and riding trails, and spotted with primitive campsites.

WATER ZONES

Use of the lake surface for all types of water recreation has proven that in the limited water area some uses strongly conflict with others. The mixing of certain uses, including motorboating, can be hazardous to life. Whiskeytown Lake is small, and its shores and water temperatures are ideal for swimming. Its protected and calm inlets provide a natural setting for quiet canoeing, and the brisk southeast winds of the open water are the souht-after natural propellants of the sailboater. The varying depths and water temperatures are the fair habitat of a variety of sportfish for the shore and boat angler.

CRITERIA FOR SETTING CAPACITY

Opinions vary widely on the definition of "optimum capacity" and are strongly influenced by location, landscape character, number and needs of the users, available alternatives, desired quality of the recreation experience, financial resources for development, and adverse environmental impacts. Whiskeytown is far enough from metropolitan centers to represent a "natural area" goal for its overnight visitors with a high



water zones

WHISKEYTOWN UNIT

WHISKEYTOWN / SHASTA / TRINITY NATIONAL RECREATION AREA

United States Department of the Interior/ National Park Service

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DSC	APR 76

level of scenic quality to fulfill that expectation. With the large number of recreational alternatives available in the region, there is little need to eliminate this natural character to obtain highly concentrated use. With limited suitable areas for development in the unit, it would also be economically unsound to modify the topography to receive large crowds. Consequently, in developing each area, capacities should be determined by the greatest user satisfaction within a context of maximum natural environment.

VISITOR PROFILE

The following visitor data was obtained from the *North Pacific Border Study,* Sociological Studies, National Park Service, by Dr. Donald R. Field, NPS, College of Forest Resources, University of Washington, Seattle, 1971. Even though this information is five years old, it does represent the type of visitor using the park.

Familiarity With the National Parks

Most visitors to Whiskeytown are experienced users of national parks, because over 85% have visited another park in the system before coming here. This may be significant in the type of information that management attempts to convey to the visitor.

Visitor Group Size

Group size of visitors ranges between two and four with 50% in this category, and 30% in groups of six or more. How much larger these latter groups were is not known, but because most of the facilities are currently designed to satisfy the two-to-four group, indications are that more large-group facilities should be flexible enough to accommodate both groups.

Overnight Visitors

Approximately half of the visitors stayed overnight at the unit or in the area, and half are local people who spend the day. Those of greater age, urban origin, and higher income constitute the majority of overnight visitors. Desire for comfort, ability to pay, and distance from home are probably the influencing factors for overnight stays. Curiously, 30% of those staying overnight indicated that they had used a lodge, cabin, or motel, although none exist in the unit. This would indicate that the hotel and motel accommodations in nearby Redding are a

significant adjunct to the campgrounds in this unit. The total of overnight visitations, despite the lack of onsite facilities, indicates a high overnight demand, even though Whiskeytown is designated as a day-use area.

Information Sources

To gain information, 50% of all visitors stopped at the visitor center, 40% talked with a ranger, and 60% read roadside exhibits. This would indicate that neither of these information sources should be relied upon solely and that all have a strong place in supplementing each other. It can also be assumed that many of those not seeking information at all were previous visitors and were already familiar with the unit.

Refreshment Purchases

Only 30% of the visitors purchased refreshments in Whiskeytown. The lack of convenient available refreshments in the unit and the purchase of supplies in Redding by day-users resulted in this low percentage of purchases even though the area is characterized by high summer temperatures, active recreation, and isolation.

Visitors to Whiskeytown

The nature and origin of the visitor to Whiskeytown is perhaps of greatest importance in facility and program planning. From the limited data available, several important facts emerge.

Visitor Origin. Eighty-two percent of visitors were from California, 10% from Oregon, and 8% from Washington. Sixty percent were from metropolitan areas. Because the closest metropolitan areas are in California, it is reasonable to assume they were from the Bay area, Sacramento, or farther south, thus requiring them to travel too far for a day-use experience only. Thus, most of this 60% (allowing part of this percentage for visitors passing through and engaging a single day-use visit only) were visitors requiring overnight accommodations. Apparently, the remaining 40% from the nonmetropolitan areas were closer to the unit and therefore likely to be day-use visitors.

Visitor Age and Marital Status. The age of visitors is as follows:

18 to 29 years	34%	1/3
30 to 39 years	25%	1/4
40 to 49 years	21%	1/5
50 to 59 years	11%	1/10
60+	10%	1/10

Thus, approximately 60% of the visitors were from 18 to 40 years. This alone is of limited significance until combined with the marital status of this group. Because 84% of the visitors were married, the high percentage of 18 to 40 year olds were parents and likely to bring families to Whiskeytown. This is borne out by data that indicates that 60% of the visitors had children (California 64%). Of all the visitors, 45% had one or two children under 18 years of age, and of the visitors with children, 74% had one or two children under 18 years. The average family size was 3.3 with only 28% having no children. Whiskeytown, therefore, is a family recreation area, with predominantly one or two children per family. Facility planning development, and activities should strongly reflect the needs of this dominant group.

Visitor Occupation, Education, and Income. The information on occupation, education, and income includes the most significant data for planning recreation facilities to meet the needs of all social levels. Expressed is a general high-to-low rating by occupational social status, 38% were in a high status, 22% in a medium status, and 28% in a low status. The remaining 13% were students, unemployed, retired, or otherwise not in the labor force. Therefore, 60% were in the high and medium group, with the total of 88% gainfully employed and able to visit the unit with their own financial resources.

Income data indicates even greater strata of upper and medium income users. Sixty-two percent are in the $10,000 income level and above. Of these, 38% were in the $10,000 to $15,000 group and 24% in the group $15,000 and higher. The $7,000 to $10,000 income group totaled 22%, and only 16% earned $7,000 or less. Clearly, the dominant users of Whiskeytown were in the middle income level.

Education levels for users of the unit are predominantly those who have completed high school and have attended or completed college. Only 10% have less than a high school education, 33% have completed high school, 26% have had some college, and 31% have completed college or more.

Although other parks surveyed were not listed in the available data, the information states that Whiskeytown has the highest percentage of high school level visitors. The percentage of college level visitors was about the same as for other parks. The educational level of visitors was generally lower than that of other units in the National Park System.

Whiskeytown predominantly serves the middle class, as reflected by occupational, income, and educational statistics. The 16% minority users earned less than $7,000 a year. How much less than $7,000 is not known, although it is reasonable to assume that there is little or no use of the area by citizens at the poverty level or by the 600,000 citizens in the impacted urban areas of the metropolitan centers of northern California. Therefore, like most other units in the National Park System, Whiskeytown, although only 3½ hours' driving time from these people, does little to supply outdoor recreation for them. The "National Parks for the Future" task forces pointed out in 1972 that the National Park Service does not serve all the people, and Whiskeytown is no exception.[1]

Visitation at Whiskeytown is indicated as follows:

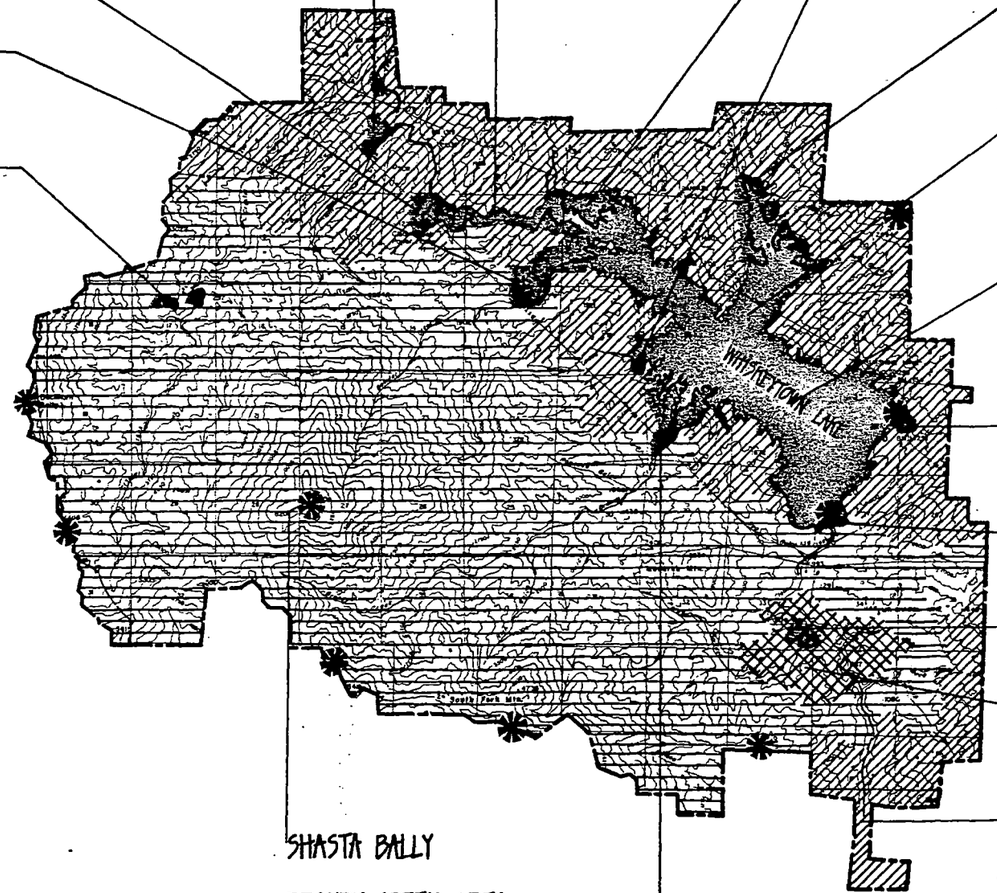
Year	Total Visits	Overnight Stays	Year	Total Visits	Overnight Stays
1964	389,932	9,799	1970	1,164,354	70,380
1965	612,998	28,808	1971	1,153,361	68,777
1966	857,069	21,396	1972	932,173	72,691
1967	835,120	51,836	1973	931,286	64,981
1968	872,010	73,157	1974	791,400	65,513
1969	1,044,124	68,815	1975	1,274,017	77,868

Visitor impact fluctuates quite widely, and holiday weekends are especially heavy. During the July 4 weekend in 1971, there were over 50,000 visitors in this unit. Such peak loads exceed present service and facility capacity of both Government and concessioner operations in the area. Seasonal fluctuation in travel is great, ranging from about 16,000 during the month of January to over 268,000 during July.

EXISTING DEVELOPMENT

Since the establishment of the Whiskeytown unit in 1965, a preliminary master plan was prepared by the National Park Service based only on the

[1] Report of the Task Forces of the National Parks for the Future Study, The Conservation Foundation, 1972.



TOWER HOUSE HISTORIC DISTRICT
GOLDRUSH ERA HIGHWAY JUNCTION
restorations for interpretation
gold mining demonstration
gold panning, picnicking

POWERHOUSE AREA
RUSH OF TRINITY WATER INTO LAKE
fishing, boat launching, picnicking

BOULDER CREEK AREA
SHADY VALLEY WITH MANY BOULDERS
camping, picnicking, swimming, play fields

CRYSTAL CREEK CAMP
ISOLATED GROUP CAMPING
playing fields, partying

CLEAR CREEK ARM OF LAKE
NARROW CHANNEL WITH COLD WATER
exceptional fishing, canoeing and other boating

OAK BOTTOM
GOOD HIGHWAY ACCESS
camping, picnicking, restaurant
marina and boat launching, swimming

DRY CREEK GROUP CAMP
ISOLATED, WOODED PENINSULA
swimming, partying

WHISKEY CREEK AREA
LIGHTLY WOODED LAND, WATER-ORIENTED
group picnicking, swimming, boat launching
store for supplies

WHISKEY CREEK ARM OF LAKE
BIG INLET WITH LITTLE WIND
swimming and scuba diving, scattered picnicking
canoeing and other boating, good fishing

MAIN BODY OF LAKE
BLUE LAKE WITH GREEN MOUNTAINS BEYOND
scattered swimming and picnicking
sailing and other boating, fishing

VISITOR CENTER
PLACE TO ORIENT USERS
interpretation and information, viewing

WHISKEYTOWN DAM
J.F. KENNEDY DEDICATION SITE
interpretation, viewing

N.E.E.D. CAMP
ENVIRONMENTAL EDUCATION

NO HUNTING

CLEAR CREEK CANYON
RUGGED, DEEP GORGE
fishing, hiking

SHASTA BALLY

BRANDY CREEK AREA
HEAVILY WOODED VALLEY
swimming, picnicking, camping
marina and boat launching

BACKCOUNTRY FOREST
THE COOL, FRAGILE BULK OF PARK
hiking, horseback riding, hunting
4-wheel drive and auto touring, trailhead parking
scattered camping, picnicking, overlooking

BRUSHLAND
HOT, BUT SOME SHADE IN PINE GROVES
trailbiking, biking, walking, auto touring, hunting

WILDERNESS RESTORATION AREA
FOREST PROTECTED BY NO LOGGING OR HUNTING
interpretation, research, wildlife viewing,
fishing, camping, hiking, horseback riding

VISITOR CONCENTRATION
MAJOR FACILITIES

MAJOR OVERLOOK

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concepts of use

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WHISKEYTOWN / SHASTA / TRINITY NATIONAL RECREATION AREA

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611 | 20,009C
DSC | JUNE 76

OAK BOTTOM AREA

overnight camping - 105 walk in sites
camper and trailer parking - 100 double spaces
sandy beaches - 88 parking spaces
picnicking - 19 sites
7 lane boat launching ramp with 136 single spaces
marina concession - 36 moorage spaces
rental and supply store
comfort stations, purified water, paths, gate station, ranger station
amphitheater

WHISKEY CREEK (WEST)

5-lane boat launching ramp and 39 car/trailer spaces
picnic grounds - 16 sites
Whiskeytown store - food, sporting goods, gasoline, and post office
comfort station, purified water, foot paths,
parking - 42 single spaces

WHISKEY CREEK (EAST)

3 group picnic areas - 160 sites
beach - unsupervised
parking - unimproved 2 acre lot

BRANDY CREEK AREA

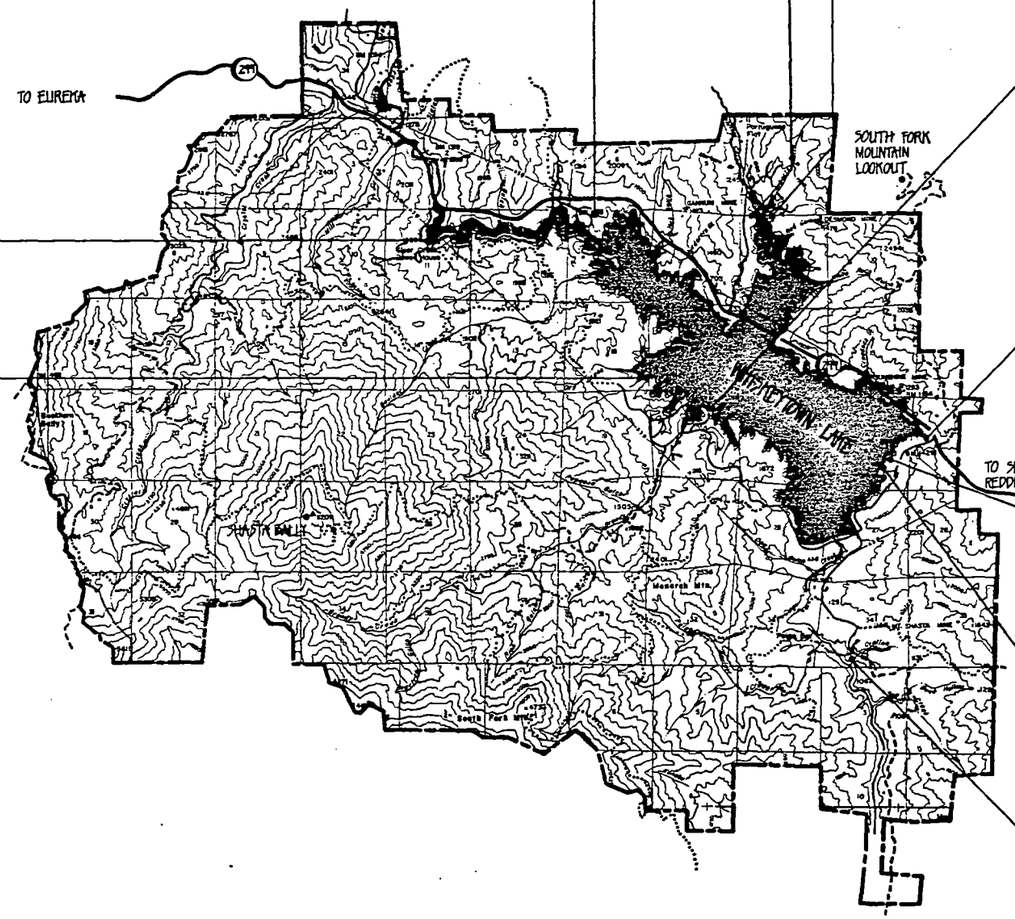
2 paved parking areas - 358 single spaces
snack bar, horse rental, marina concession - 80 moorage spaces
picnic grounds - 58 sites
overnight campers and trailers - 38 spaces
comfort station, purified water, foot paths, gate station
sandy beach
7 lane boat launching ramp with 186 car/trailer spaces

JUDGE CARR POWER PLANT AREA

picnicking
irrigated lawns and trees
comfort station

DRY CREEK GROUP CAMP

2-100 person sites



OVERLOOK AND INFORMATION AREA

one room building and rest rooms
sun shelter
parking
lawns and trees

PARK HEADQUARTERS

small butler building and house trailer
lawns and trees
paved parking area

MAINTENANCE AND STORAGE

garage and storage
parking area
boat landing

N.E.E.D. CAMP

ecology training center with multi-use hall,
cabins, parking and study ponds

HIGH-SPEED SURFACED 2 LANE ROAD
SURFACED 2 LANE ROAD
GRADED AND DRAINED 1-LANE DIRT ROAD
GRADED 1-LANE DIRT ROAD

existing development and circulation

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611 | 20,010C
DSC | JUNE 76

lands surrounding the reservoir that were purchased by the Bureau of Reclamation. Development has proceeded over the past 11 years in accordance with this original master plan. The unit has experienced increased visits with these facilities from 389,932 in 1964 to a high of 1,274,000 in 1975. The facilities currently in use are primarily for administration, maintenance, information dissemination, camping, picnicking, boat mooring and launching, swimming, and driving. (See "Existing Development" map.)

Private Lands or Inholdings

These lands, three acres each, are exempt from Park Service acquisition under the enabling law. Included in the inholdings are the Whiskeytown Store and three other parcels containing residences. Because legislation has set the use of these parcels, their continued private ownership does not constitute a threat to the park's character. In addition, the State of California has three tracts amounting to 60 acres within the park boundary.

Existing Road System

The road system within the park boundaries includes a variety of road types and ownerships: nine miles of California 299, a two-lane, high speed road; and surfaced two-lane raods owned by the county and California Division of Forestry where the road is a through road, and by the National Park Service where its function is primarily for internal use. Some one-lane dirt roads are graded only; others are graded and drained. With the exception of the dirt road to Old Shasta and to Igo, all one-lane dirt roads in the park are owned and maintained by the Park Service. All of the roads in the backcountry, with the exception of the surfaced two-lane road to the California Division of Forestry Conservation Camp, are graded dirt, one-lane roads; most are closed to traffic in the winter rainy season and are graded and opened for use in the spring. This is particularly true of the four-wheel-drive vehcile roads in the erosion-prone granitic soils of the high ridges. There is no complete access around the lake for all types of vehciles. Because of the lack of a bridge at Boulder Creek, about four miles of the one-lane road on the south side of the lake is only usable by four-wheel-drive vehicles. About 70 miles of vehicle roads are maintained and owned by the park.

GENERAL DEVELOPMENT

To implement the concepts for visitor use and the management objectives, a broad range of development, in addition to that outlined above, will be necessary in the immediate lakeshore area, the medium use zone, and

the backcountry. This will take place in the areas already partially developed and in new areas.

These developments will include facilities for overnight visitors, day-use visitors, visitor information or interpretation, headquarters and maintenance, group camping, primitive camping, environmental education, and road improvement.

Boulder Creek
Major development will occur at this site to accommodate swimming, picnicking, and camping. The site is undeveloped. It receives sporadic use by swimmers and those wishing a secluded picnic spot. The relatively flat terrain and shade in this 85-acre area will allow for various activities to be spread out without conflict between users. The area is accessible from the south shore drive.

Overnight Facilities

Four hundred drive-in camp sites for cars and trailers will be provided and located in such a manner to allow access to the shore-line for all campers. Design of the campground will lend itself to the existing landscape with a minimum of disruption to the environment.

Two small group camps with a capacity of 25 people per site will be located in the more secluded portions of the development site. Loop roads with parking will allow users to unload their gear and park away from the camping area.

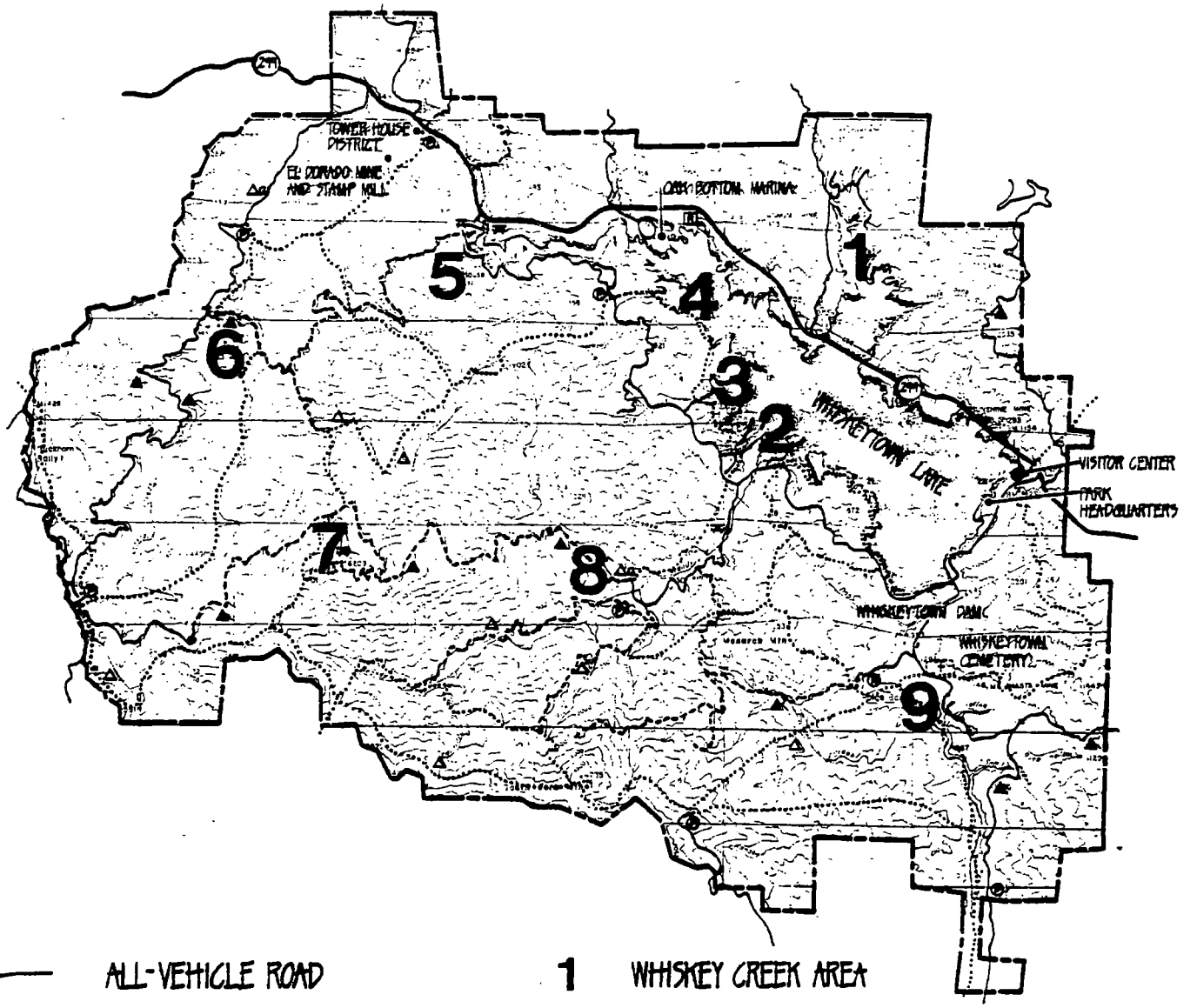
Swimming Beach

A sandy beach approximately 800 feet in length will be constructed in this natural cove. Large amounts of eroded decomposed granite choke the mouth of Boulder Creek. This material can be rearranged to provide for a quality beach. Boulder Creek, a year-round stream, will provide natural flushing action for the swimming area.

Picnicking

This activity will be permitted along Boulder Creek, where hardwoods provide bountiful shade next to cascading creek waters.

A separate 100-car lot will be constructed to provide parking for beach and picnic use.



———	ALL-VEHICLE ROAD	1	WHISKEY CREEK AREA
- - - - -	FOUR-WHEEL DRIVE ROAD	2	BRANDY CREEK AREA
·····	TRAILS-HORSEBACK / HIKING	3	DRY CREEK GROUP CAMP
▲	ROADSIDE CAMPSITE	4	BOULDER CREEK AREA
△	HIKE IN / HORSEBACK CAMPSITE	5	JUDGE CARR POWER PLANT AREA
△G	GROUP CAMP	6	D. OF F. CONSERVATION CAMP
Ⓟ	TRAILHEAD PARKING	7	SHASTA BALLY
Ⓡ	RESTAURANT	8	SHEEP CAMP
⛩	PICNIC AREA	9	N.E.E.D. CAMP

general development

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WHISKEYTOWN / SHASTA / TRINITY NATIONAL RECREATION AREA

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DSC | JUNE 76

Utilities

The existing sewage treatment plant north of Oak Bottom has sufficient capacity to handle the proposed use at Boulder Creek. A pipeline, suspended by cables, will pass over the Clear Creek Arm to carry effluent to the Oak Bottom Plant.

Water would be provided on-site by pumping and treating from Boulder Creek.

Electricity will be provided for by underground cables.

Launching facilities will not be included in development plans for Boulder Creek. Those camping with boats will launch at Brandy Creek or Oak Bottom. Moorage would occur along the shoreline with no formal development.

Oak Bottom

Activities in this area consist of camping, swimming picnicking, and boating. Facilities to accommodate these activities include a 105-site walk-in camping unit and accompanying parking area for 75 vehicles, 100 parking slots for trailer camping on an asphalt surface, a 300-foot beach and adjoining 88-space parking lot, 19-site picnic area, 7-land launching ramp and space for 136 single parking slots, 36 moorage spaces, snack bar, amphitheater, boathouse and tackle shop, and utilities. Development in this area will include modifications within existing development and a new campsite development.

Overnight Facilities

A 100-unit drive-in campsite with parking at each site will be constructed on undeveloped peninsulas west of Oak Bottom. This campground will be used on a rotational system alternating with the existing walk-in camping area. Rotations of this type will permit the campground, that is currently overused, to recover.

Parking

Boat launching of visitor-owned boats is considerably limited by available parking spaces for autos with trailers. Additional space for this type of parking will be included in the development of Oak Bottom. The creation of a 400-site drive-in campground for car and trailer at Boulder Creek will allow the closure of the 100-site asphalt campground. This existing asphalt strip will be reconverted to a 100-space parking lot for cars with boat trailers.

Restaurant

To accommodate the visitor who desires more than a snack and does not want to make the 16-mile round trip to Redding, the option for a concession-operated restaurant will be retained. The snack bar facilities at Oak Bottom meet current needs. However, should the visitor demand change in the future, an option for a concession-operated restaurant will be examined.

Sewage and Water

Existing facilities are adequate to handle the proposed 100-unit campground.

With the exception of developments mentioned above, the area will continue to provide for activities with existing facilities.

Brandy Creek

This area consists of two units referred to as the Marina Unit and Beach Unit. The Marina Unit contains double parking spaces for 186 cars with boat trailers and 14 single slots, 7-lane launching ramp, 80 moorage spaces; snack bar, horse rentals, boat rentals and 38 spaces for self-contained camping vehicles. The only proposed action for the Marina Unit would involve restripping the existing parking lot to handle single cars if use requires more moorage slots.

The Beach Unit consists of a 500-foot beach that will accommodate 876 swimmers, two lots providing parking for 344 vehicles, and a 58-site picnic area. Proposed development includes an extension of the beach, increasing the number of picnic sites, and manipulation of the existing parking lot.

Swimming Beach

The beach will be extended 500 feet northward to the old launching ramp. Development will require additional sand to be hauled onto the gently sloping beach. The sand beach would be 25 feet in width and accommodate approximately 125 additional bathers.

Picnicking

Forty-eight additional sites would be added within the existing area to meet increasing demand. It is not unusual for this area to be filled by 10:00 a.m. on summer weekends.

Parking

It is estimated that 406 single parking slots are required to meet all the needs of various users in the beach unit at maximum capacity. There are 344 spaces existing and 30 more could be provided in the vicinity of the old launching ramp for a total of 374 spaces. This number is adequate to meet demands and allow for a quality experience. Full capacity would be realized if all users were present at the same time. Obviously, many activities overlap; many swimmers are also picnickers. Therefore, the existing parking area is sufficient to meet daily requirements.

Group Camps

The group camp at Dry Creek next to the lake is one of the most heavily used areas in the unit, although no visitor convenience facilities of any consequence have been installed there. Cars park at random under the cover of deciduous oaks. Yet this facility is booked for use every day throughout the spring, summer, and fall months. There is obviously more demand than this one group camp can satisfy, because many applicants for reservations are turned away. In addition to providing restrooms, water, and parking at Dry Creek, new small group-camp facilities will be added north of the conservation camp on Crystal Creek Road in the vicinity of the tailings from the Clear Creek Tunnel construction, Sheep Camp, and the area previously described at Boulder Creek.

Dry Creek

The area currently consists of two separate sites where a maximum of 100 people are allowed at each site. Parking is permitted anywhere within the area or adjacent to the campsites.

A loop road will be constructed allowing campers to unload their equipment at the camping area and then proceed to a 60-space central parking lot. To alleviate the problems of mixing groups, only one site will be provided with a maximum of 100 people. Sewage will be handled by self-contained toilets and water provided by a new well.

Crystal Creek, Sheep Camp

These two camps will each provide for a group of 25 at each site and provide for conveniences as described above.

Boulder Creek

Description of these two 25-person group camp sites are included in the description for that area.

Facilities are currently available to accommodate 200 persons in one area at Dry Creek. The net benefit of creating new sites and handling the same number of people will be to disperse them over a wider area in different locations and thereby avoid conflicts between user groups.

Whiskey Creek West
Due to limited space, this area will continue to function at its current level of development.

Whiskey Creek East
A two-acre parking lot that could accommodate 200 cars, three separate group picnic sites totaling 160 sites, and a 300-foot beach provide facilities for visitor use. Reservations, up to a year in advance, are taken for the use of these sites.

The existing 200-vehicle unimproved parking lot will function adequately to accommodate use of the three group sites. The beach will continue to exist as an unprotected area for bathers.

Boat-In Picnic Sites
Boat-in picnicking around the lakeshore and on islands will be retained to accommodate visitors who wish to enjoy the lake with greater privacy than the public picnic grounds offer. In addition, the inlets, tiny beaches, and shady groves next to the water can be enjoyed without the cost and environmental degradation of road building.

Headquarters and Maintenance Area
The existing unit's headquarters are housed in a temporary Butler building and a trailer, which will be replaced by a permanent structure to adequately provide office space for the staff. A new maintenance area will be designed and screened from view of the headquarters building, the highway, and the lake.

Trailhead Camping
To serve more visitors, additional accommodations for camping will be provided at trailheads. Primitive tent/camper facilities will be installed

at the all-vehicle trailheads on Boulder Creek, Brandy Creek, at the Sheep camp on the south side of Kanaka Peak (accessible only from Igo), and on the road above the state conservation camp.

Vehicle Camps
These camps will be provided wherever convenient, small, level-forested areas can be found with a year-round water source. Informal parking spaces will be provided near the campsites.

Camping Areas for Hikers and Horsemen
Primitive camping facilities will be provided in wooded flat to moderately sloped sites, with water available from a creek or spring throughout the dry season, to meet the needs of horsemen and hikers. These will be low-density facilities. Vehicles will be left at trailhead parking areas.

The combination of trailhead camps with parking, four-wheel-drive vehicle camps, and campsites for horsemen and hikers will encourage and open the backcountry to greater use and enjoyment.

Trail-Bike and Trail-Buggy Areas
These vehicles will be allowed on all the four-wheel-drive roads.

Bicycle Use
Bike lanes will be added along existing road rights-of-way where the terrain is suitable.

Road System
To provide convenient internal vehicular circulation to the areas of highest development and visitor concentration, the existing paved park road from the dam to Dry Creek will be extended and surfaced along the alignment of the present unimproved road. It would then join the graded and drained dirt road approximately at Boulder Creek, and continue on to complete the loop along the south side of the lake at the Judge Carr Power Station. In addition to paving horizontal and vertical alignment will be necessary in order to provide a safe road with acceptable grade to handle cars hauling large trailers. The road will carry traffic in opposite directions with no vehicular conflicts. Two major structures will be necessary at Boulder Creek and at an unnamed drainage. Construction will minimize cuts and fills where possible. This extension will be part of the John F. Kennedy Drive and will be named accordingly.

The only through road on the north side of the lake is California 299. This highway is heavily traveled by logging trucks, freight trucks, public buses, and passenger cars traveling at high speed and is, consequently, extremely hazardous for internal park use. Present long-range plans of the California Division of Highways call for making California 299 an expressway from the west boundary to the Tower House Historic District and also widening the highway to four undivided lanes beyond the historic district to the eastern boundary. After passing through the unit, the four-lane road will widen again to freeway standards, passing to the north of Old Shasta and probably joining Interstate 5 on the north side of Redding. Park overpass junctions would be provided at Kennedy Drive, Whiskeytown Road, Oak Bottom, the Power Station Road, and the French Gulch Road. Impacts of this plan on the Whiskeytown unit would be enormous. Traffic speed through the area would be greater and with a higher road noise level; the existing steep, ugly scars from the present road widening are visible from most parts of the unit and would be greatly enlarged; huge overpass structures would have to be built, supplying more dominating manmade structures and further scarring to the hillsides; and finally, adding masses of erodable material from the cuts and fills to the siltation of the lake. At the French Gulch Road intersection, the proposed elevated overpass structure would be on the very edge of the Tower House Historic District. The construction and presence of this interchange would endanger the old and sensitive building, plantings, and atmosphere of the historic zone.

This further destruction of the natural environment of a national recreation area is unacceptable, and should not be permitted. The current eight-mile section of the road through the area is relatively straight and has gradients that loaded logging trucks can accelerate while traveling uphill. Improved outside deceleration lanes and minimal overpass construction combined with retaining the existing road width should be studied, as well as other low-impact alternatives for this section of California 299. Location of the intersection of the highway with French Gulch Road should be studied for movement northward and away from the Tower House Historic District. Other two-lane paved roads in the unit are Kennedy Drive, which is part of the county road to Igo; the road from California 299 to the California Division of Conservation Camp; and the road to the Judge Carr Power Station and the short lengths of country roads to French Gulch and past the Whiskeytown Store.

In addition to completing the paved road around the south side of the lake, all-vehicle roads are proposed to permit access to trailhead parking in the backcountry. Campsites will be provided at these parking areas. Four-wheel-drive-vehicle roads or hiking and riding trails will

continue on into the higher reaches of the backcountry where primitive camping areas will be provided. This system of all-vehicle roads leading to trailheads will be connected to more difficult roads and trails, thus providing the basic access web to expand the use of the recreation area into the forested and rugged backcountry.

Trail Links

Horse and hiking trails connecting the three units are possible and will be studied for future development. At the closest point, the Trinity unit is five air miles from Whiskeytown and the Shasta unit is merely 3½ air miles. In addition, trail connection with the Pacific Crest Trail immediately to the east and to the Sierras will be studied.

Interpretation

The Whiskeytown unit has a broad range of resources requiring an interpretive program to increase understanding of the unit's natural resources, manmade influences, educational opportunities, and local history. Specific facilities and means around which an interpretive program will be centered are as follows:

The visitor center for orientation and general information regarding water safety, backcountry survival, and fire prevention.

The option for new amphitheaters near public campground areas where groups may be contacted by interpretive personnel will be explored.

Conducted trips, self-guiding devices, and the outdoor exhibits for natural resource interpretation. The resources include the past, present, and future geology; wildlife; vegetation; water; and man's impact and accommodation to them.

The Judge Carr Power Station area will be used in interpreting the design and operation of the power generating system and the lake.

Walking tours and group-seating areas will be used in the Tower House Historic District with interpretive personnel conducting programs centered around the historic background of the area with emphasis on gold and other mining activities. This program will be coordinated with the national historic site at French Gulch and with the museum operated by the State of California in Old Shasta. The historic district, a full-scale, real-life site of the gold rush period, complements the offerings of the museum and provides exhibits impossible of duplication under museum conditions.

The NEED Camp and its surrounding three square miles of protected natural area will be the most highly organized education, and thus interpretive, facility.

Role of Concessioners

Those needs that can best be met by private commercial concessions will be continued and, where necessary, expanded. Services now provided include marina boat docking, boat rental, supply stores, and snack bars at Brandy Creek and Oak Bottom. No additional marinas will be developed, although those existing will be expanded to full capacity to meet increasing demands.

As the backcountry becomes more accessible, the need for additional horses on a rental basis is anticipated. This need will be met by expansion of the existing horse-rental concession.

It is expected that the Whiskeytown Store will be capable of meeting the demands of the proposed Whiskey Creek campground expansion. Concessioners are often the principal, and sometimes, the only contact with personnel who have knowledge of the park. The concessioner will assume a part of the information and interpretive responsibility in addition to that now carried by park personnel. This additional interpretive role will be especially needed at points of horse and boat rentals, and in other places as the need arises.

National Environmental Education Development Camp and Environmental Study Zone

One of the most important new programs of the National Park Service is that of training students in the relationship of man to the natural environment and his responsibility as steward of his environment. To accomplish this, it has embarked on a program of environmental education. Curriculum aids have been developed, park facilities have been opened to school districts as environmental study areas, and in some parks, special overnight facilities have been made available for the use of visiting classes. The present facility consists of an office, classroom, kitchen and dining room building, cabins for students, a pond, Clear Creek, and 400 acres of surrounding forests. It operates at its full capacity, which is 125 students a day. This facility has been improved by providing winterized structures for the students, additional reforestation, trails, and the expansion of the surrounding protected area for such uses as hunting to three square miles to encompass most of the immediate watershed and an easily identifiable boundary on the crests of ridges. This cutover area will be allowed to restore itself to its original primitive condition.

The facility has been operating with the cooperation of local county schools. However, as a national program and facility, the center should be available to the broadest spectrum of students from all ethnic, social, and income groups from rural, suburban, and urban areas. The Whiskeytown unit will retain full control of the center, and will be responsible for its operating personnel and maintenance. It will also provide vehicles for transporting students from distant areas on a cooperative arrangement with the involved rural and urban school districts.

Funding

Legislative expenditure ceilings imposed for development in the enabling legislation have been almost depleted ($80,000 remains available under present ceiling). It will be necessary to amend the legislation to provide adequate funds for planned developments to serve the needs of the visiting public.

UTILITIES

Electricity is supplied by the Pacific Gas and Electric Company (P.G.&E.), which has low-voltage aboveground lines that serve the various facilities of the park. Also, there are high-voltage transmission lines that are mostly within half a mile of the northeast shore of the reservoir. Although these lines are easily noticed by the park users, P.G.&E.'s policy of not opening a service road unless absolutely necessary and doing most of the servicing and checking by helicopter, has minimized their impact on the landscape. On the southwest side of the reservoir, the Bureau of Reclamation has high-voltage lines from the power station. Service roads to these lines are continually graded whether access is needed or not; this procedure unnecessarily damages the hillsides. The bureau will be encouraged to use helicopters for its inspection and maintenance work along the transmission lines. Also, the penstocks (water conduits), transmission towers, and transformer stations of the bureau are quite obtrusive. The Park Service will urge that these be painted, so that they will harmonize with the landscape. The needed electric power for the proposed developments will be installed underground.

Sewage from small developments is currently disposed of mainly in septic and disposal fields. Larger and heavier use areas are treated by sewage treatment plants with spray fields for such facilities as Oak Bottom and

Brandy Creek. A sanitary engineering study of the sewage treatment needed for the proposed major developments will be necessary to determine how the park will continue to best meet the standards of the Regional Water Quality Control Board. Capacity of Oak Bottom is sufficient to handle projected use at Boulder Creek. At the time of construction a study will be required to utilize the best technical means available to transport sewage via a pipeline suspended over the Clear Creek Arm. Recycling toilets with large holding tanks will be used for the back-country facilities that are accessible by road. Campsites accessible only by trail will have pit toilets.

Water from the lake, filtered and purified, is pumped to the major developments along the lakeshore, except at Whiskey Creek. Wells are also used by the owners of inholdings and for potable water at the Park Service's Whiskey Creek facility. The Clear Creek Community Services District takes water from the reservoir in a 30-inch underground pipe down the park "panhandle" along Clear Creek Canyon to their district southeast of Igo. The water that will be needed for further lakeshore development will be pumped from the reservoir, filtered and purified. For the trailhead parking and camping areas, water, treated if necessary, will be piped from nearby springs and creeks. Other water for the backcountry visitor is available in the numerous springs.

Telephone service is supplied by Pacific Telephone Company. Any new phone lines will be installed underground.

Water, electricity, and telephone service is in ample supply and availability places no constraints on existing or proposed development.

EXTERNAL AND INTERNAL THREATS

There are some proposals that pose major threats to the park. Where considered appropriate, alternate proposals are offered.

Two proposals of the Bureau of Reclamation are quite unacceptable: to build another tunnel from the Trinity River to a new reservoir just above Whiskeytown Lake, and to build another reservoir downstream from Whiskeytown Dam. These dams would inundate French Gulch and two of the park's finest areas — the Tower House Historic District and Clear Creek Canyon.

The tentative plans of the California Division of Highways to widen California 299 through the park would be very destructive, as explained earlier. In addition, the building of a freeway to

the west of the Tower House Historic District through decomposed granitic soils could result in much silt being deposited in the lake. Before the Park Service gives approveal for the freeway portion on its land, the California Division of Highways should be required to prove that they have devised means of minimizing this siltation and other problems associated with highway widening. Compliance with Section 106 and Executive Order 11593 procedures will also be necessary.

The plans of private developers to subdivide the lands adjacent to the park's northern boundary into small lots threaten the beauty of the park. This action has already begun on portions of the boundary. The steep hillsides that characterize this area are unsuitable for building the numerous roads and houses that the subdivisions project. The plan to treat the sewage from these developments in septic tanks constitutes a threat to the purity of the water within the park. The Park Service will encourage the supervisors of both Shasta and Trinity Counties to adopt zoning and other regulations that are compatible with the natural environment of the park.

The threat of fire has prompted the California Division of Forestry to propose a 100-foot-wide fuel-break with a fire trail to be built on the park land along the southern and western portions of the park boundary to ease the threat of fire coming into or leaving the park. Careful planning and coordination between the park and Division of Forestry will privide a fire protection system that, while reducing fuel volumes in key areas, will also blend fuel-breaks into the surrounding cover by screening and feathering so that little or no adverse effect will occur. Thinning to park officials' specifications will open the cover, affording more accessible areas for visitors not now available to them and provide safety islands for visitors and fire fighters in case of need. The denuding of these ridges would destroy the beauty of the planned ridge trails; however, properly planned fuel-breaks with a fire trail replacing the proposed fire road would enhance the recreationist experience and create a safe environment both for the recreationist and those assigned to fight fire in the area. The addition of helispots can be provided by using a helicopter for quick access to all of the backcountry and by continuing to rely on the California Division of Forestry's air tankers and ground forces. Also, the possibility of wildfires started by park visitors will be lessened by continued use of fire permits in the backcountry and allowing campfires without permit in established developed areas only.

APPENDIXES

A: MANAGEMENT OBJECTIVES

B: LEGISLATION

C: BIBLIOGRAPHY

D: CONSULTANTS AND TEAM MEMBERS

A: MANAGEMENT OBJECTIVES

A. NATURAL RESOURCES

Provide an envionment for visitor recreational use in a healthful, pleasant outdoor setting.

1. Preserve the natural features identified as being of special or scientific value.

2. Perpetuate an area to demonstrate ecological relationships and to show the effects of man in this ecosystem for environmental education.

3. Rehabilitate vegetation in the area to return it to a more nearly natural state to benefit wildlife and the visitor experience.

4. Restore streams to as near natural conditions as possible.

5. Preserve a natural bear population.

6. Develop backcountry water sources for wildlife and visitor use.

7. Control nuisance species such as poison oak and yellow jacket hornets in developed public use areas.

8. Manage renewable resources for disposal to economic use only where such disposal will not have a substantial adverse effect on recreation activities.

9. Manage nonrenewable resources in a way that their disposal will have no substantial adverse effect on recreational values of the area.

B. CULTURAL RESOURCES

Preserve the significant examples of prehistoric and historic man, and restore historic features to the extent necessary for understanding the history of which these remains are a part.

1. Preserve the integrity of the Tower House Historic District.

2. Preserve traces of the "Big Ditch" and make accessible for visitor interest and interpretation.

3. Achieve complementary programs of development, preservation, and public use of historic features with the State Historic Park at Old Shasta.

4. Encourage preservation of the historic features of French Gulch to complement the regional historic scene.

C. RECREATION

Provide the visitor with opportunity to engage in the greatest variety of recreation and interpretive activities possible, within limits of tolerable impact on resources and compatibility of uses.

1. Establish and implement standards for water surface and shoreline use in terms of visitor density.

2. Manage backcountry in accordance with carrying capacity of resource.

3. Provide information services to visitors at strategic locations.

4. Provide interpretive services to foster appreciation for and enjoyment of the natural, historic, and archeological features of the area.

5. Continue an environmental education camp responsive to program needs.

6. Provide public access to areas of the park offering developed facilities and areas of recreational scenic, cultural, or scientific nature.

7. Maintain concessioner-operated services to accommodate the need for commercial necessities and conveniences deemed necessary and desirable to the visitor.

8. Foster the retention and operation of the Whiskeytown Store and Post Office for visitor and resident convenience.

9. Develop camping and day-use facilities to optimum capacity, determined by use density standards and impact on resources.

10. Participate with other agencies and institutions in planning and coordination of management to the extent possible to achieve a regional recreational use plan.

11. Formalize the agreement with the Bureau of Reclamation on scope of responsibility in areas where recreational use may conflict with purposes of the Central Valley Project.

12. Provide program estimates on development proposed in master plan, and seek legislative ceiling change to authorize that program.

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As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The Department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the graphics staff of the Denver Service Center. NPS 833C

☆ U.S. GOVERNMENT PRINTING OFFICE: 1976—677-346/105